THE ARCHITECT & BUILDING NEWS

9 DECEMBER 1954 · VOL. 206 · NO. 24 · ONE SHILLING WEEKLY

- OFFICES AT WYTHENSHAWE
- HOSPITAL EXTENSION, LITTLE PLUMSTEAD
- INFORMATION DIGEST

PUBLISHED IN LONDON SINCE 1854

Lifts and Escalators by J. & E. Hall Ltd.





Business proprietors, alive to the commercial value of providing easy vertical transport between ground and upper floors, insist on the inclusion of such facilities when new buildings are planned or old premises modernised. Architects, guided by past experience, specify the make which gives long, trouble-free service despite continuous and rough use. That is why the name of J. & E. Hall appears on a large proportion of the lifts and escalators installed in department stores and offices all over this country and abroad.

Typical of the many escalators designed, manufactured and installed by J. & E. Hall is the example illustrated, with a vertical height of 36 feet, 4 feet wide and over 60 feet long on the incline, capable of handling more than 8,000 passengers per hour.

J. & E. HALL
LIMITED

DARTFORD KENT



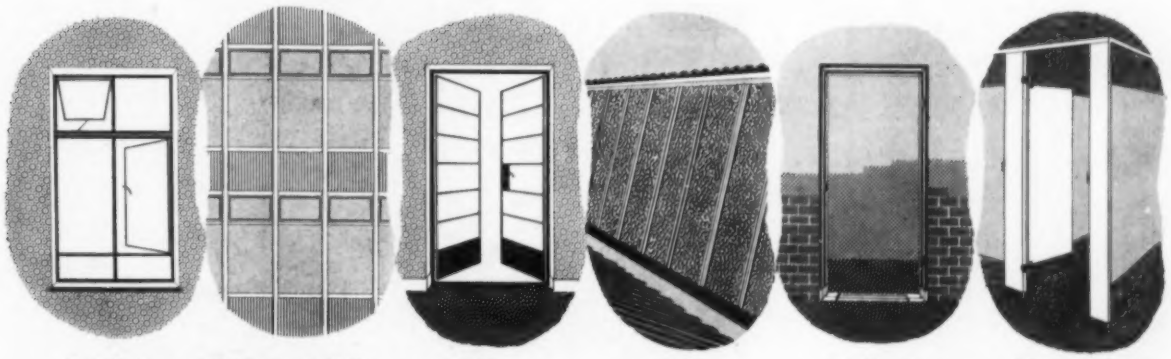
John Borthwick won't keep in character

Architects who have never met John Borthwick, our North West Divisional Manager, are due for a surprise. Quite naturally this broad, chunky man was a second row forward. Equally in character is his passion for vintage cars. And then you get to know him and discover he was once an art student, and holds an industrial design diploma, and can discuss the work of Modigliani or Corbusier and cultivates chrysanthemums in his garden. Strange mixture. You grumble that Mr. Borthwick is one of those people who just won't keep in character. But then, after all, he is a Williams & Williams Divisional Manager !

* **Mr. J. Borthwick supervises offices in Belfast (23762). Birmingham (Shirley 3064). Glasgow (Douglas 0003). Liverpool (Central 0325). Manchester (Blackfriars 9591).**

Other offices at: Bristol (38907). Bromley (Ravensbourne 6274). Cardiff (27092). Crawley (2200). Hertford (3969). Leeds (21208). London (Sloane 0323). Maidstone (51750) Newcastle-upon-Tyne (21353). Nottingham (52131). Reading (50291). Sheffield (51594). Southampton (26252).

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These photographs, of London County Council's new Secondary School at Kidbrooke show at the right, a decorative and wall saving application of Gulf Panels in the kitchens and below the uninterrupted lines of a long panel in one of the staff rooms.

LIGHT IN WEIGHT
(Ideal for wall fixing)

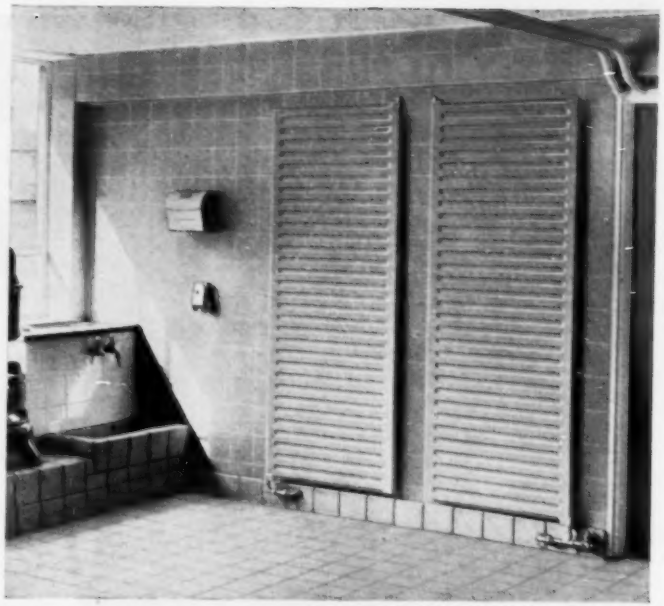
EASY TO PAINT, CLEAN AND KEEP CLEAN

COST LESS

ECONOMICAL TO FIX

FROST PROOF

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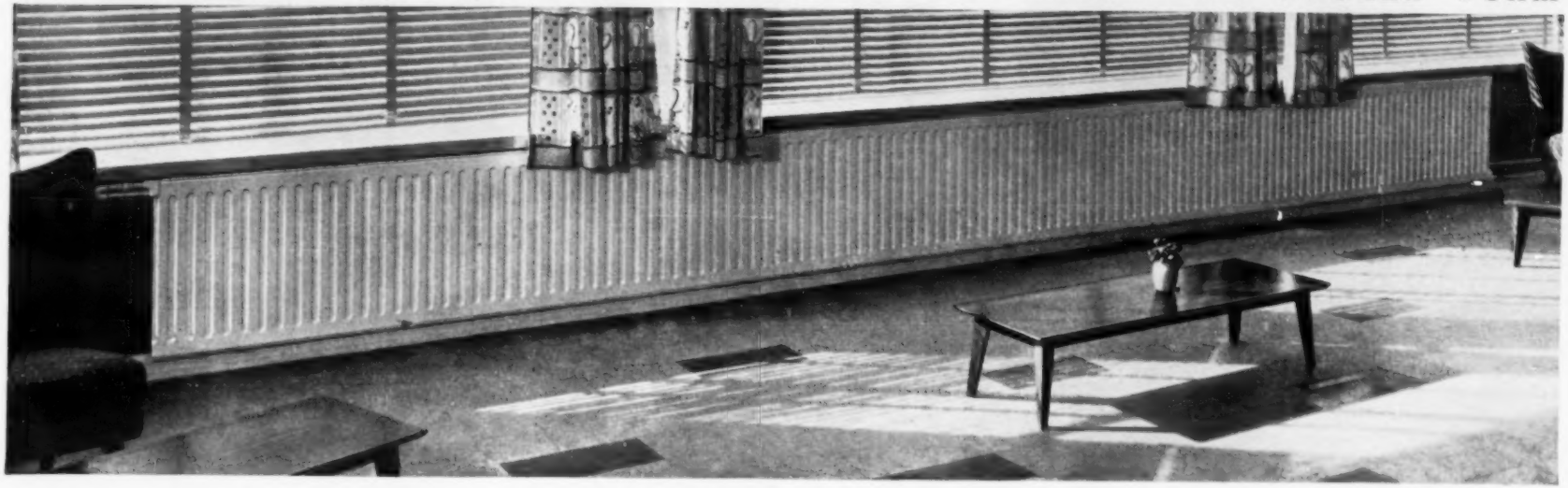
GULF RADIATORS

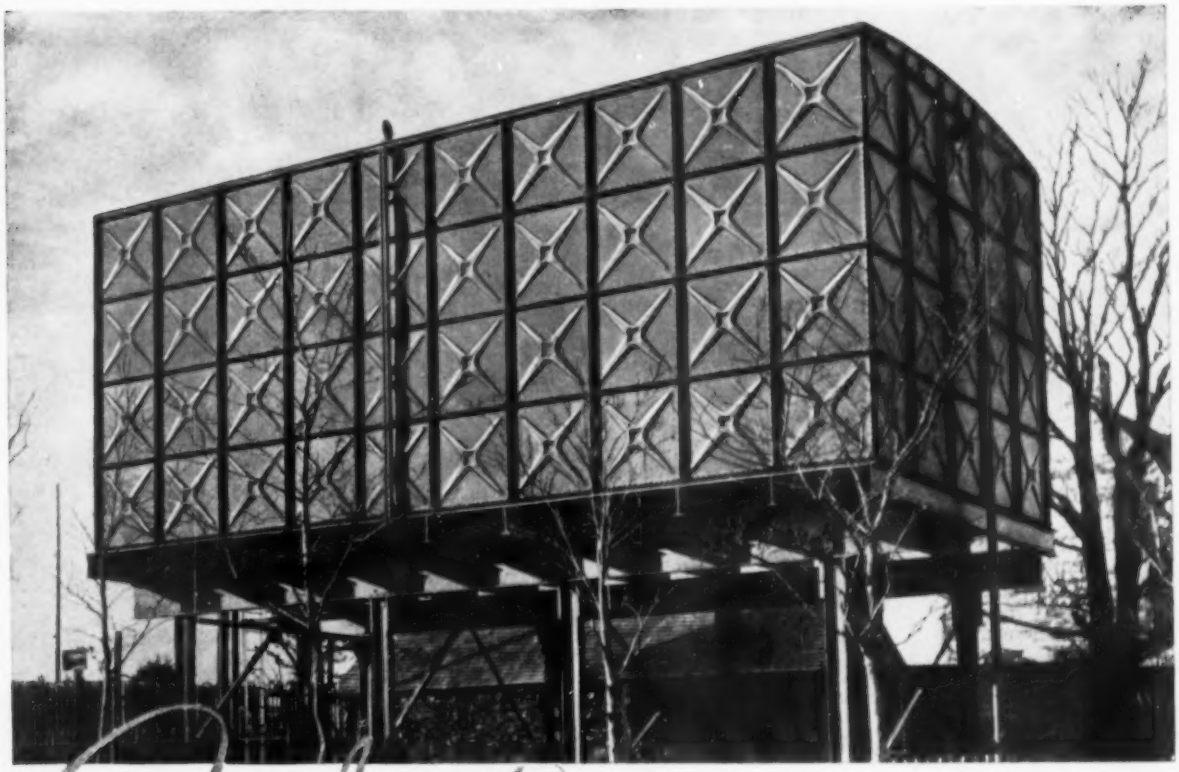
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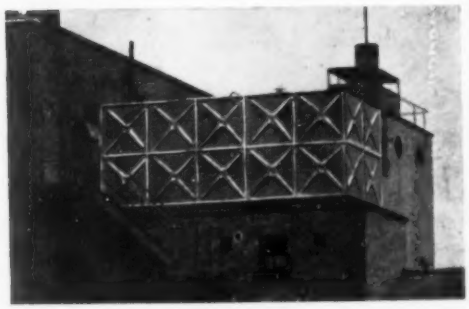




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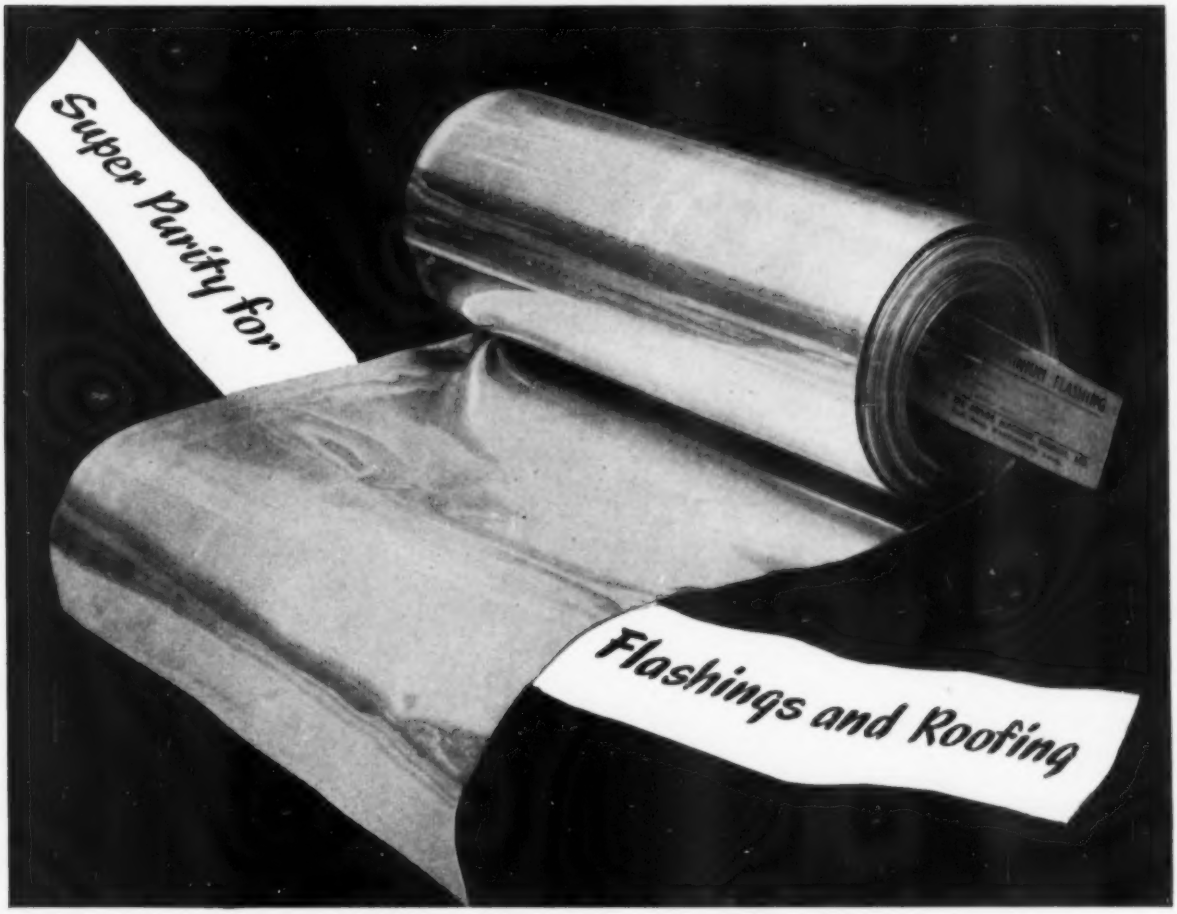
SUNDEALA METAL FIXINGS—
visible or concealed systems
in steel or aluminium sections

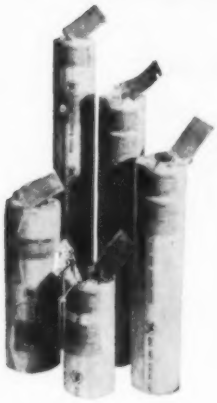
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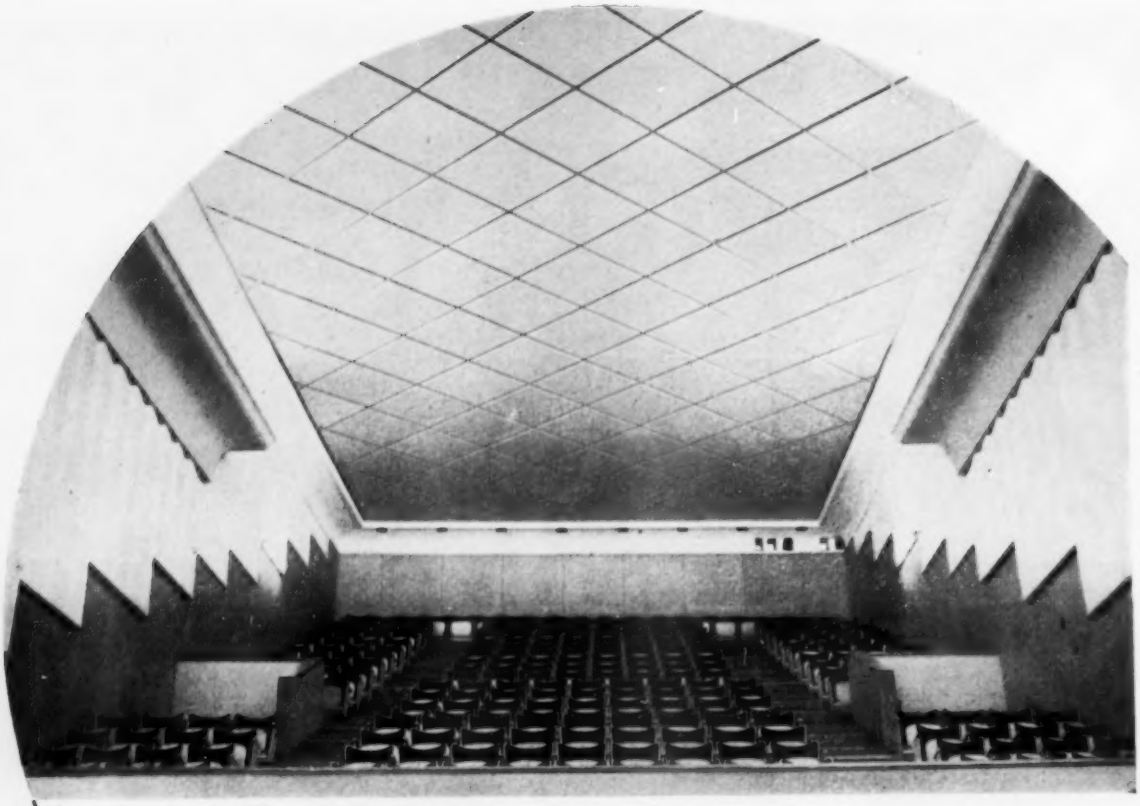
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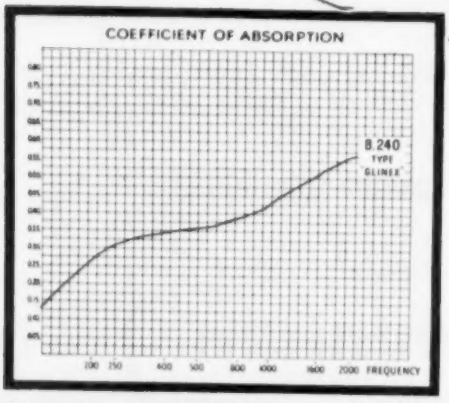
The illustration shows the use of "Glinex" in a cinema in Antwerp.

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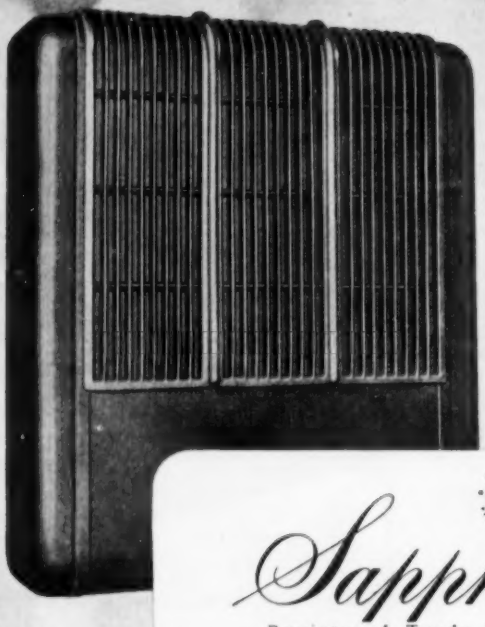
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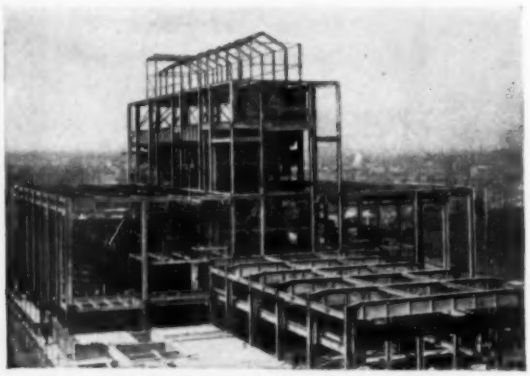
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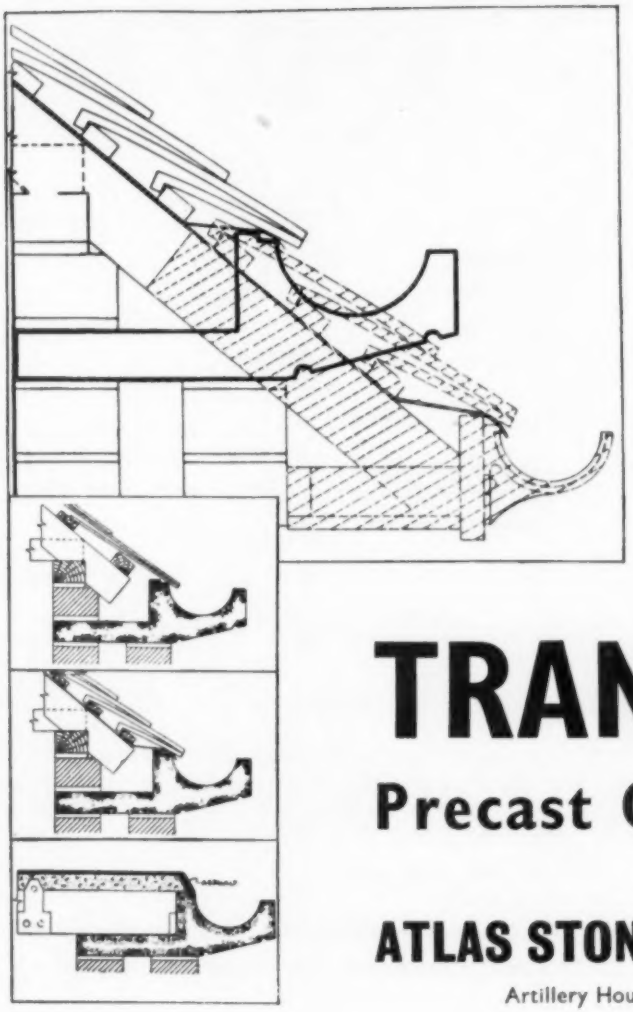
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The TRANSVERCO guttering is made from high grade, reinforced, waterproof concrete which requires no treatment or maintenance.

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The diagrams on the left show :—

Top : Sectional view. The shaded portion shows saving over normal gutter.

Lower : Method of fitting Transverco guttering for slate, tile and flat roofs.

TRANSVERCO

Precast Concrete Gutter

Full details from

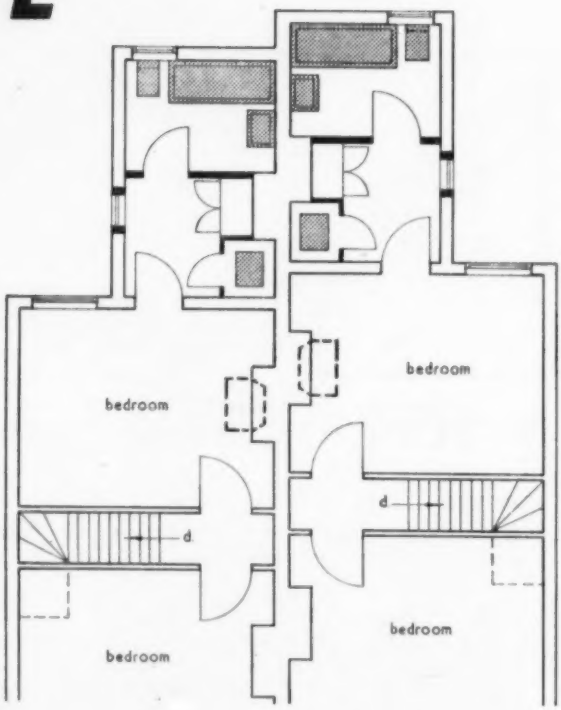
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In the CONVERSION OF SUB-STANDARD HOUSING

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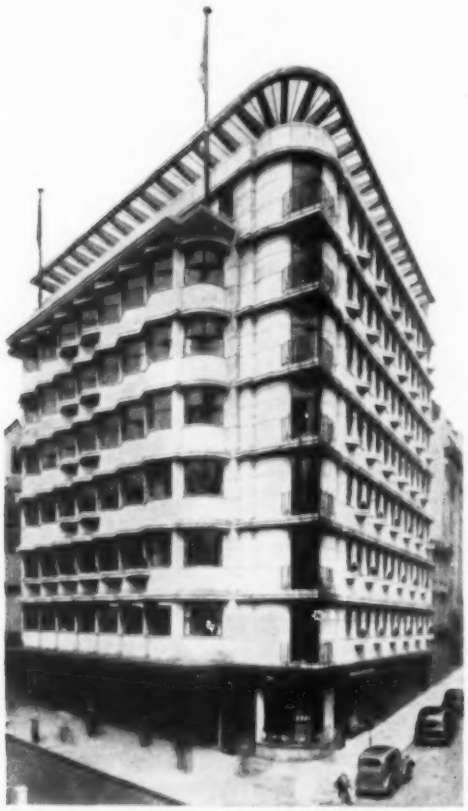
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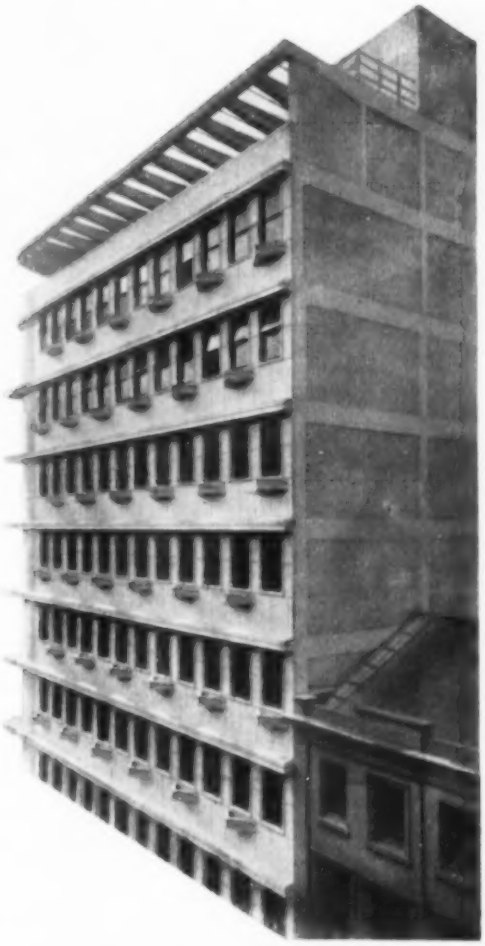
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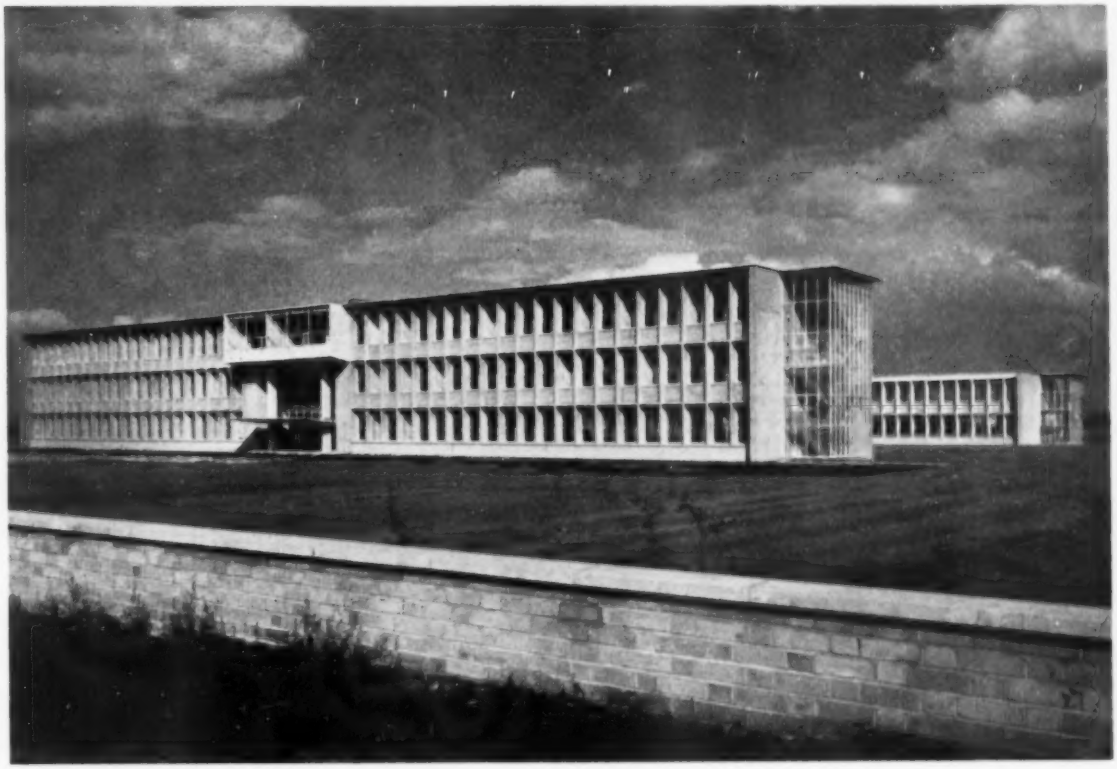
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RENOLD CHAINS NEW BUILDING
Wythenshawe, M/C.
Featured in this issue.

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Reinforced Concrete and Glass

WINDOWS

at

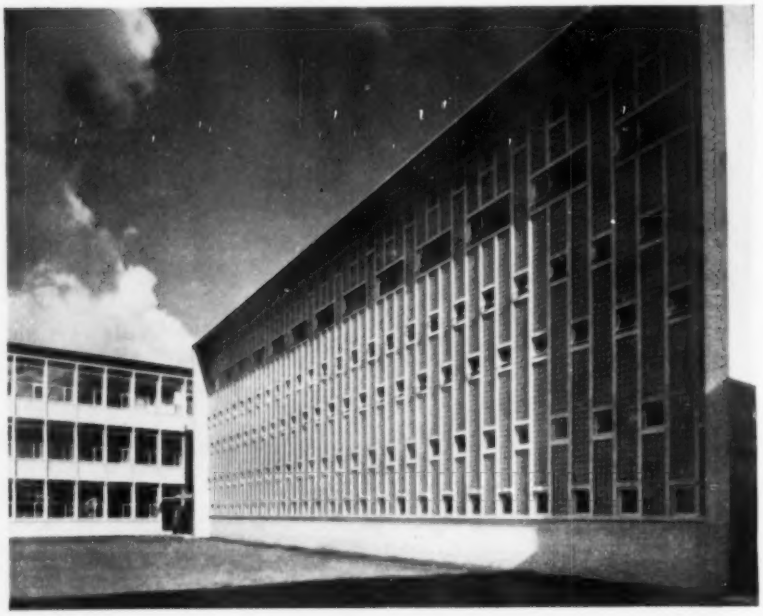
Reynold House
Wythenshawe, Manchester.

Architects:
Messrs. Cruickshank & Seward

•

One of two similar windows constructed of precast mullions and transomes having an infilling of Insulight Hollow Glass Blocks.

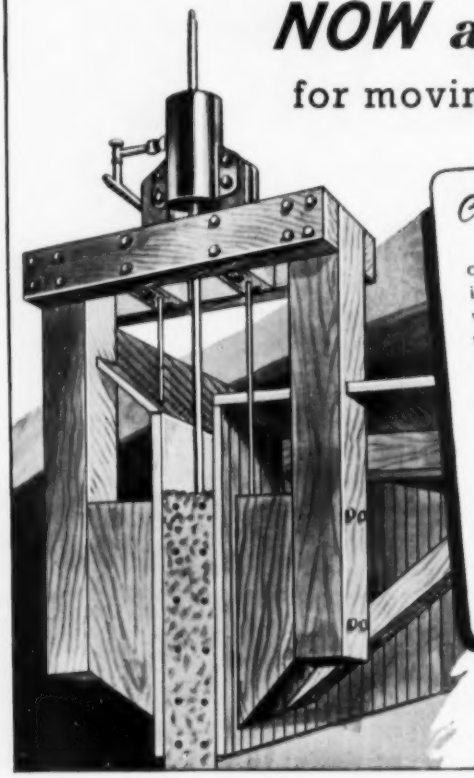
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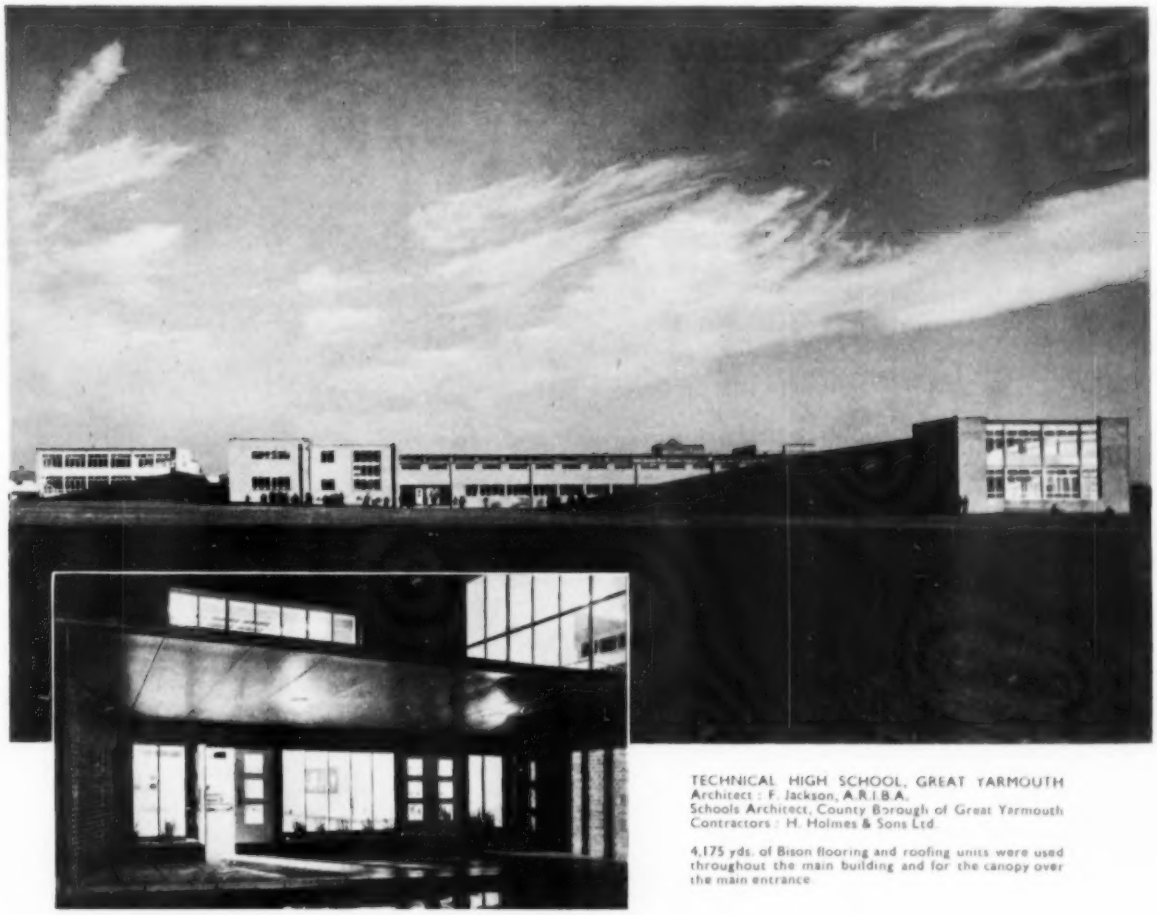
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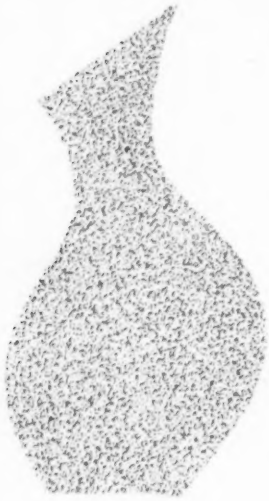
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Architects: Messrs. Cruickshank & Seward, F/F.R.I.B.A.

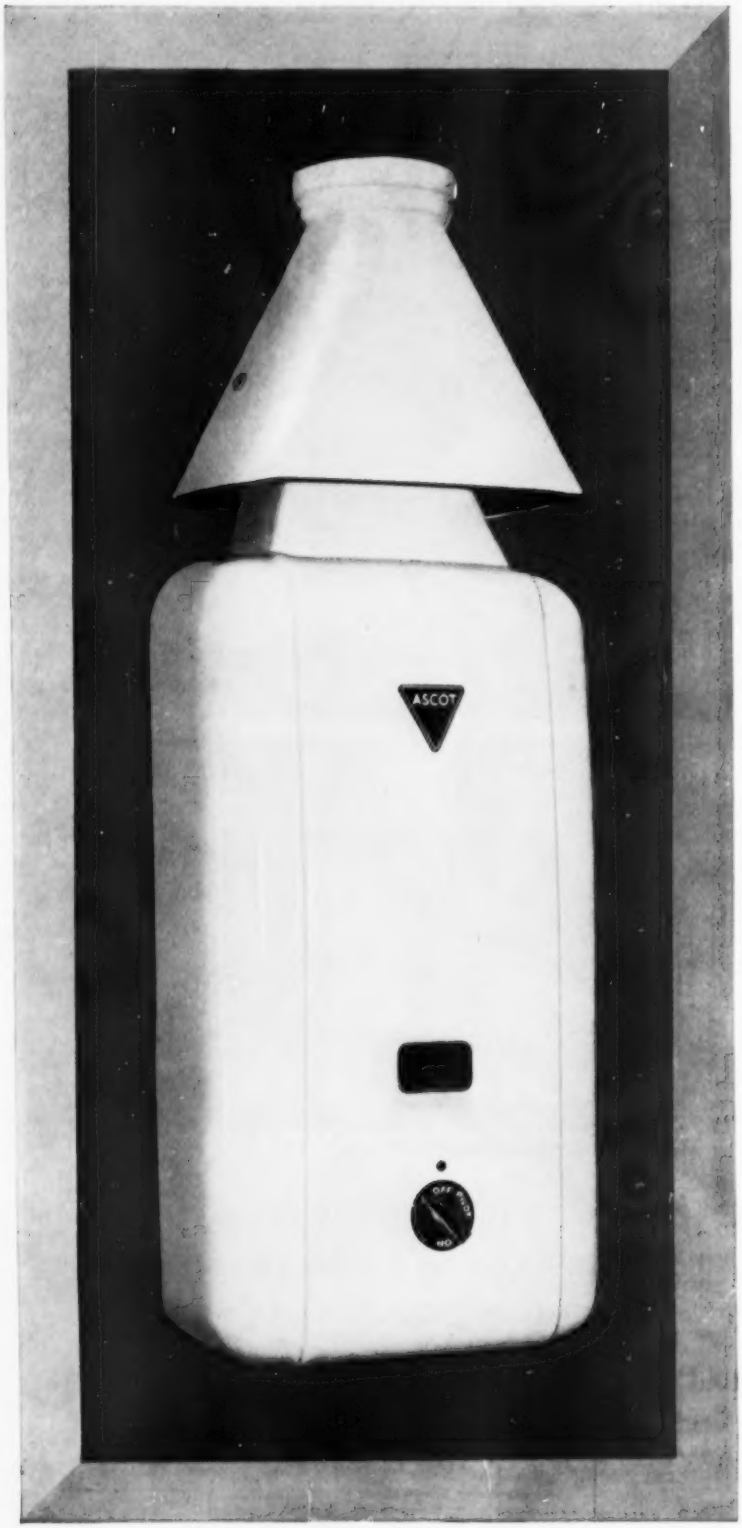
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New!

An elegant one-piece case with a panelled front now gives greater dignity to the famous Ascot 709 and 709B multipoint water heaters. The new case is also easier to keep shining bright, for it is of deep-drawn steel without any joins, and is vitreous enamelled all over to present an unbroken surface that time cannot tarnish. The change is only to appearance; mechanism, operation and high efficiency are unaltered.
An advantage that fitters will appreciate is that removal of the one-piece case gives free access to all parts of the heating body.

✳

A similarly panelled one-piece case is now also fitted to the Ascot SG32/1 bath water heater.

ASCOT

always lead

ASCOT GAS WATER HEATERS LIMITED • 255 NORTH CIRCULAR ROAD • LONDON NW 10
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Vol. 206 No. 24

THE ARCHITECT & BUILDING NEWS

9 December 1954

"The Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid: U.S.A. and Canada $9.00

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GONE WITH THE WIND

GALES in all sea areas; showers heavy at times; snow on high ground; temperature below normal—this is the weather that architects and builders must protect their clients against!

It is a sobering thought, but nevertheless it is these extreme conditions that should be present in the imagination of the architect at the design stage, and the operative, when he is putting the bits and pieces together on the site, should be constantly aware that the wind and the rain, the frost and the sun are together or severally testing his workmanship day and night.

The old days when slates and guttering could be replaced and lashings of paint applied at small cost are gone for good. Repairs will continue to be expensive and men to carry them out too few, so that good construction and sound workmanship are more than ever necessary if our weather is worsening.

Even if there is to be no general change in the climate, there are bound to be hard years during the long life of the average building, and the public has the right to expect the building industry to produce tough and resilient structures in character with the British weather.

Our native optimism has led many small builders to put up flimsy bungalows in Northern counties, ignoring the significance of sturdy vernacular staring them in the face. On the coast where fishermen's cottages had the sense to venture no nearer to the sea than experience of its strength and violence warranted, streets of villas have been put up almost on the tide-line, and have had to be protected by expensive sea-walls to prevent their basements filling up at every gale.

The low-lying lands in river valleys are thickly populated and regularly flooded; caravan towns spring up and are blown down at regular intervals.

It is heroic, but it is not the war.

In 1091 "there was a tremendous gale and hurricane in London which shattered more than six hundred houses, unroofed the church of St. Mary at Bow, and reduced other churches to ruins. If it is true that this wind lifted beams 26 feet in length and drove them 20 feet into the ground, the damage done is hardly surprising; but unless such hurricanes were more common in early days it does not speak well for medieval building that in 1210 many of the monastic buildings in Dunstable fell through the violence of the wind, as did also a tower at Bury St. Edmunds, two at Chichester, and one at Evesham. . . . About the middle of the fourteenth century the quire of Norwich seems to have been wrecked by the fall of the spire in a great wind."*

And in 1954 this—"Nearly 130 feet of the roof was ripped from one wing, and the school front looked as if it had been hit by a bomb. Torn and twisted window frames and piles of brick covered the empty desks. Part of the flat timber roof was folded back like a box lid." And this—"Hurricane blasts tore off a large section of the roof of a garage and workshop . . . five hundred square feet of heavy masonry of the outer wall collapsed into the garage, pancaking five motor cars."†

It is only fair to add that the school referred to above was 1941 vintage, but it is clear from newspaper accounts that there is still too much building that is no improvement on the empyrical methods of the Middle Ages.

The moral of this is:—"Wisdom is knowing what to do; skill is knowing how to do it; and virtue is damn-well doing it."

"Here is to-day's weather forecast: a deep depression is moving towards the British Isles. . . ."

* *Building in England.* L. F. Salzmann. *Oxford University Press* 1952.

† *Yorkshire Post*, 1 *December*, 1954.

EVENTS AND COMMENTS

CHRISTMAS AGAIN

The overlapping of the Guy Fawkes and Father Christmas seasons has already been suitably commented upon in *Punch*. Santa Claus, or someone very like him, has been in operation in many a large store for some time now. As if to compete with the modern vogue of putting Fairy Tales on Ice, one shop I noted invited children to come and see Father Christmas in Davey Jones' Locker—so that is how Capitaine Cousteau earns a living in winter. That large Roman temple in Oxford Street has had its Christmas trees and other decorations since early November. Regent Street has fairy lanterns. I have had my first Christmas card. Have you made your plum puddings yet?

SINGLE-STACK PLUMBING

Nearly 5,000 professionally interested people saw the recent demonstrations of single-stack plumbing at the Royal Sanitary Institute. In answer to requests for further demonstrations the D.S.I.R. has arranged for members of the staff of the B.R.S. to be available at demonstrations to be held on January 5, 6 and 7, 1955, between 10.30 a.m. and 6.30 p.m. I hope that this will not be the end of the demonstrations because, although 5,000 is a very respectable number, it represents only about a tithe of the number of architects, surveyors and students who ought to see it. The demonstration takes up rather a lot of room in height and would, I imagine, be expensive to re-erect. All the same, I hope that consideration has been given to putting it on outside London.

HOUSING ASSOCIATIONS

It has been suggested that building societies should make loans to housing associations on the Scandinavian pattern. In Sweden, for example, the bulk of the housing is put up by housing associations with money initially lent interest-free by the State. Some of the associations are very large indeed and have their own building components factories. One association has its own set of standards. The housing association does not always sponsor new work but sometimes waits to be approached by a group of families wishing to build a block of flats. A committee is formed and acts as a client putting down a proportion of the cost of the building; the building is completed by the housing association and then handed over as a going concern to the committee who make themselves responsible for the running of it. The Government loan plus a fee for building services is gradually paid off so that eventually the building becomes the property of the families living in it. Although the selling of individual flats in a building is not common, it is widely practised in Scotland.

The writer of an article on this subject in the *Building Societies Gazette* says that blocks of flats, far surpassing in elegance and variety most of our municipal efforts, are to be found everywhere on the Continent, with a special emphasis in the Scandinavian countries.

While this last statement might have been true in 1947, I feel that it should not now be allowed to go unchallenged. While, admittedly, some of our local authorities still lag behind I would say that, taking into consideration the much larger amount of accommodation which we provide,



New block of flats alongside the ruins

RECONSTRUCTION IN WEST BERLIN



Block of flats adjacent to the Berlin Town Hall

our housing is now in advance of anything being produced on the Continent.

NEW BEASTIE

The news that another and hitherto unknown wood-boring pest is at large in London may or may not shake you to the core. Properly there are two new ones but they are so alike and so similar in habits that their accurate identification is not of close personal interest to you or me (both are, in fact, wood-boring weevils). When I tell you that they are only to be found in timber which has already been seriously attacked by wet rot you may feel, as I do, that they are really the lesser of two weevils.

LIGHT FITTINGS

It is surprising what a lot of progress has been made by British producers of light fittings in the last three years. The small exhibition at the Building Centre is a gay affair and shows quite a wide range of domestic fittings. Prices seem more reasonable this year. If some of the designs are a trifle bizarre there are many that are plain and serviceable.

YOUR HOUSE

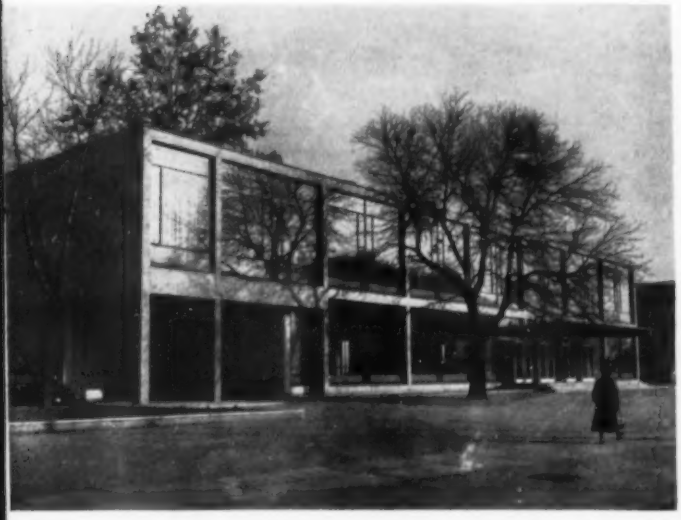
I am pleased to hear that the R.I.B.A. travelling exhibition No. 2, "Your House," is to be shown at the B.C. from January 3 to January 15. I hope it will be found possible to do this with future R.I.B.A. travelling shows. I hear also that the R.I.B.A.-Cement and Concrete Association exhibition, "Concrete in Building," is also coming to the B.C. during the second half of January. It was only open for 10 days at the R.I.B.A. and was missed by many.

OIL FUEL IN THE HOME

It is extremely difficult to obtain information on domestic-sized oil-fired hot-water and heating installations. We hear a great deal about the amount of fuel oil now available from our great refineries but there seem to be on the market extremely few small oil-burning appliances suitable for the average house. Shell-Mex and B.P. are making a bold attempt to put this right in an exhibition which opened at the Building Centre on Tuesday. Some 20 types of burner, boilers or conversion sets are shown, with technical information on performance and installation.



Point block, West Berlin



New University building for the Study of Music, W. Berlin

OLD POLY BOYS PLEASE NOTE

Mr. William J. Eltham, Registrar of the Polytechnic School of Architecture, Surveying and Building, has been appointed secretary of the Society of Industrial Artists. Mr. Eltham has served the school for 25 years and it is thought that many of the old students who have known him would like to subscribe to a presentation which is to be made to him. If you would like to contribute, write to Mr. John S. Walkden at the Poly.

DUST AND BUILDINGS

I see that the Lord Mayor of Liverpool, when speaking recently to the Liverpool Architectural Society, said that he liked the architect of to-day who was building something that did not collect dust. I suppose by this that he meant that he did not like cornices, ledges nor projections. Wren would have been unpopular with the Lord Mayor.

Would it not be better to get rid of the dust-producing elements in Liverpool and allow the architects to get on with producing architecture with or without dust collectors?

ABNER







Top L. Progress photo of the new West German Foreign Office at Bonn

Above: New Office Building, West Berlin

Model of layout of barracks for the new German Army

RECONSTRUCTION IN W. GERMANY

NEWS OF THE WEEK

R.I.B.A. Symposium on High Flats

The design and construction of high blocks of flats of ten storeys or more is a big and immediate problem in Britain. A few have been built, more are planned, and there is a widening acceptance of the view that they have an important rôle to play in meeting the housing needs of the country. Neither their economics nor their social implications, however, are yet fully understood; and few people in these islands have had an opportunity of appraising the visual effects of tall buildings in towns, particularly in housing development centres.

The lack of open spaces in central areas, the congestion of streets, high densities, the high cost of land, the encroachment of building on agricultural land, and—too often—the featureless spread of housing estates beyond the confines of their cities are compelling a growing number of local authorities to consider the contribution that the building of high flats can make to their housing and reconstruction programmes.

Some discussion of these matters is urgent and the Royal Institute has, therefore, arranged to hold a symposium on the whole problem. This will take place on Tuesday, February 15, 1955, and will last the whole day. The chair will be taken by Dr. J. L. Martin, F.R.I.B.A., Architect to the London County Council, and a group of authoritative speakers will introduce the discussions on the various aspects of the problem.

The morning session, beginning at 10 a.m., will deal with questions of policy and planning; and the afternoon session, lasting until about 6.30 p.m., will be devoted to construction, technology and economics.

The Institute feels confident that these discussions will be helpful not only to architects, but to all who are concerned in the reconstruction of cities or in the planning and administration of new towns.

Although the symposium is intended mainly for architects, invitations to attend and to take part in the discussions will be extended to a number of contractors, housing managers, planning officers and others directly concerned in the building of high flats.

A synopsis of the main points to be discussed at the symposium and the names of the speakers taking part will be announced at an early date.

Admission will be limited and by ticket only. A charge of 10s 6d per person will be made to cover morning coffee, buffet lunch and tea. Applications for tickets, accompanied by cheques or postal orders for 10s 6d, should be sent to the Secretary, R.I.B.A., as soon as possible.

Retention Moneys on Building and Civil Engineering Contracts

The Report has been published of the Working Party appointed in June, 1952, by the Minister of Works to investigate the possibility of bonds or guarantees replacing the present system of guarantees. It is published at 6d by H.M.S.O. The Working Party consisted of Messrs. E. A. Seal, chairman, Deputy Secretary M.o.W.; J. T. Brooks, F.R.I.C.S., Chief Quantity Surveyor, M.o.W.; P. E. R. Jeffries, F.R.I.C.S., Chief Surveyor, Admiralty; G. V. Strudwick, Director of Contracts, M.o.W.; C. A. Emil Thatcher, A.R.I.B.A, Superintending Architect, M.o.W.

N.F.B.T.E. Presidential Nominations

Mr. Harvey G. Frost, O.B.E., of Bury St. Edmunds, Suffolk, has been nominated by the Council of the National Federation of Building Trades Employers to be President of the Federation in 1955. Other presidential nominations by the Council are:—Senior Vice-President: Mr. Nigel Hannen (London); Junior Vice-Presidents: Mr. L. A. Walden (Henley-on-Thames) and Mr. C. P. Howells (Caerphilly).

The Annual General Meeting of the National Federation will be held in London on January 26 next.

COMING EVENTS

Royal Institute of British Architects

December 9-22. "Improvements and Conversions," an exhibit by the Ministry of Housing and Local Government. Mondays-Fridays 10-7: Saturdays 10-5. At 66 Portland Place, W.1.

December 13 at 6 p.m. Library Group Meeting. Mr. D. Stratton Davis, A.R.I.B.A. will introduce an evening on J . B. Papworth. At 66 Portland Place, W.1.

The Illuminating Engineering Society

December 14, at 6 p.m. "Maintenance of Lighting Installations," by J. Mortimer Hawkins, W. Robinson and J. W. Strange, at The Lighting Service Bureau, 2 Savoy Hill, W.C.2.



The 17-storey block of flats at Nantes designed by M. Le Corbusier is nearing completion, and is expected to be ready for occupation by March 1955.

Italy Awards Gold Medals to British Designers

The International Jury at the Tenth *Triennale* in Milan has made seven awards to the British designers whose work was included in the British Exhibit. The *Gran Premio*, the highest award of all goes to Lucienne Day for her textile designs, which are produced by Heal's Wholesale and Export, Ltd. Gold Medals go to Robin Day for the design of Hille Furniture and to Ernest Race for the design of Race Furniture. A further Gold Medal goes to Lucie Rie and Hans Coper for their ceramics, and John Reid has been awarded a Silver Medal for light fittings made by George Forrest & Son, Ltd. Lucienne and Robin Day, Ernest Race and John Reid are all Fellows or Members of the Society of Industrial Artists.

EXHIBITION

An exhibition of furniture designed by Robin Day, A.R.C.A., F.S.I.A., for Messrs. Hille of London, Ltd., opened at Messrs. George H. Lee's store at Liverpool on December 6 and remains open for three weeks. The exhibition was organized in response to requests from architects in the North of England.

Scottish Competition

The City and Royal Burgh of Perth are in course of preparing the conditions for an architectural competition for a redevelopment scheme within the centre of the city. The area, known as the Meal Vennel Redevelopment Area, when redesigned will contain shops, offices and residential property. The assessor is Mr. R. J. Naismith, of Sir Frank Mears & Partners, Edinburgh. Details will be announced in the New Year.

CORRESPONDENCE

To the Editor of A. & B. N.

Pseudo-Tudor

Sir,—I see that in your edition of December 2, A. N. Other is astonished that the Essex County Council should refuse permission for the plaster to be removed from a 16th-century timber farmed cottage.

Many 16th and 17th-century buildings, particularly in East Anglia, were plastered from the beginning, others were plastered in the 18th century when sash windows were often inserted. These plastered façades are delightful and well worth preserving.

It is, unfortunately, all too common for the plaster to be removed and the sash windows replaced by leaded casements. The result usually looks bogus and far less attractive and harmonious than the original.

I know nothing of the actual case, but it seems to me that the Essex County Council are more likely to deserve congratulations than ridicule.

I am, etc.,

GEDDES HYSLOP.

[A. N. Other writes that he was astonished not by the Council's decision but by the phrase "pseudo-Tudor" to explain it. Mr. Hyslop's letter is a big improvement. Actions that might appear arbitrary need proper explanation.—ED. *A. & B. N.*]

CORRECTION

The Paper by Sergei Kadleigh read at the Institution of Structural Engineers' meeting on December 7 was on "The Social and Town Planning Significance of High Buildings" and not on "High Paddington," as stated in Coming Events of last week's issue. In the same note the Paper on "Foundations for High Buildings," by A. W. Kempton, should have read. A. W. Skempton.



Staunton Harold Hall, near Ashby-de-la-Zouch, scheduled as a building of outstanding architectural and historical interest. The present owners have notified their intention to demolish.

Berkshire Society of Architects: Members' Exhibition

The Berkshire Society of Architects, a branch of the Berks, Bucks & Oxon A.A., has arranged, with the kind permission of Mr. W. A. Smallcombe, Director of the Reading Museum and Art Gallery, an Exhibition of post-war work of its members at the Town Hall, Reading.

The opening ceremony was performed by Alderman T. S. W. Smart—Chairman of the Libraries and Museum Committee, on Saturday, December 4. It remains open daily from 10 a.m.-5.30 p.m. until December 18.

The membership of the society is made up not only of architects in private practice, but also of those engaged in public service. The Exhibition indicates by means of drawings, photographs, and models, the great versatility of local architects in the variety of jobs they undertake.

Examples of proposed and/or completed projects include — Council estates, Public offices, Drill hall, Shops, Restaurants, Flats, Canteens, Memorials, Factories, Laboratory buildings, Old people's homes, Fire stations, Sunday school hall, Library, Swimming bath.

To the "man in the street" the functions of an architect are for the most part shrouded in mystery and, except for the fact that he is supposed to be "arty and temperamental," little is known about him.

The Exhibition shows that not only is it the architect's job to produce fine designs, but also to translate them into bricks and mortar. This requires the preparation of scale drawings of every portion of a building, full size details, estimates, specifications and even models. The fact is also demonstrated that his expert knowledge and independent position make his advice invaluable during all stages of planning a building project

Endeavouring still further to interest the general public in the work of local architects, the Berkshire Society of Architects arranged a public meeting yesterday, in the Reading Museum and Art Gallery, when a lecture on a subject of great topical interest to the "man in the street" entitled "New Materials and Techniques for Building" was given by Mr. Gontran Goulden, T.D., A.R.I.B.A., Deputy Director and Technical Officer of the Building Centre, Tottenham Court Road, London.

The Executive Committee of the Berkshire Society of Architects extend a very cordial invitation to members and friends of the many bodies who have an interest in Architecture and Building, to come along.

In addition, the Travelling Exhibition prepared by the Royal Institute of British Architects entitled "Home and Surroundings" will be held at the Odeon Theatre, Cheapside, from December 15 to January 1, 1955.

Private Architects' Work in Kent

Two thirds of the building work of the Kent County Council is prepared by private architects. In the past three years they have received £174,347 in fees.

Now the Buildings Committee recommends giving less work to private architects so that the proportion of two to 11 will eventually be reversed.

Private architects have been used since 1945 because of the amount of new building. In October the Building Department had a £5,231,014 programme and there was every indication that the present level of building would be maintained for at least 10 years.

Although the staff of the department had risen by 48 since 1946, the number of architects had fallen by 11.

The county architect says it will be better if more work is done by the department, but extra staff will be needed — 26 more architects, with salaries totalling £25,250 a year. There would be a saving of £30,000 in fees paid to private architects but about that amount would be needed for more accommodation. This would mean the work organized on a sounder and more economic basis, with quicker results.

The Committee has approved the idea in principle and a group of members will examine the details.

English Church Treasures

An important exhibition—the first of its kind—designed to reveal the great wealth of secular silver plate in the possession of churches throughout the land has been arranged by the Historic Churches Preservation Trust and will be held in London in January. The exhibition is unique in that it comprises pieces not designed or intended for ecclesiastical use but which, by one means or another, have passed into the service of the Church during the past four centuries.

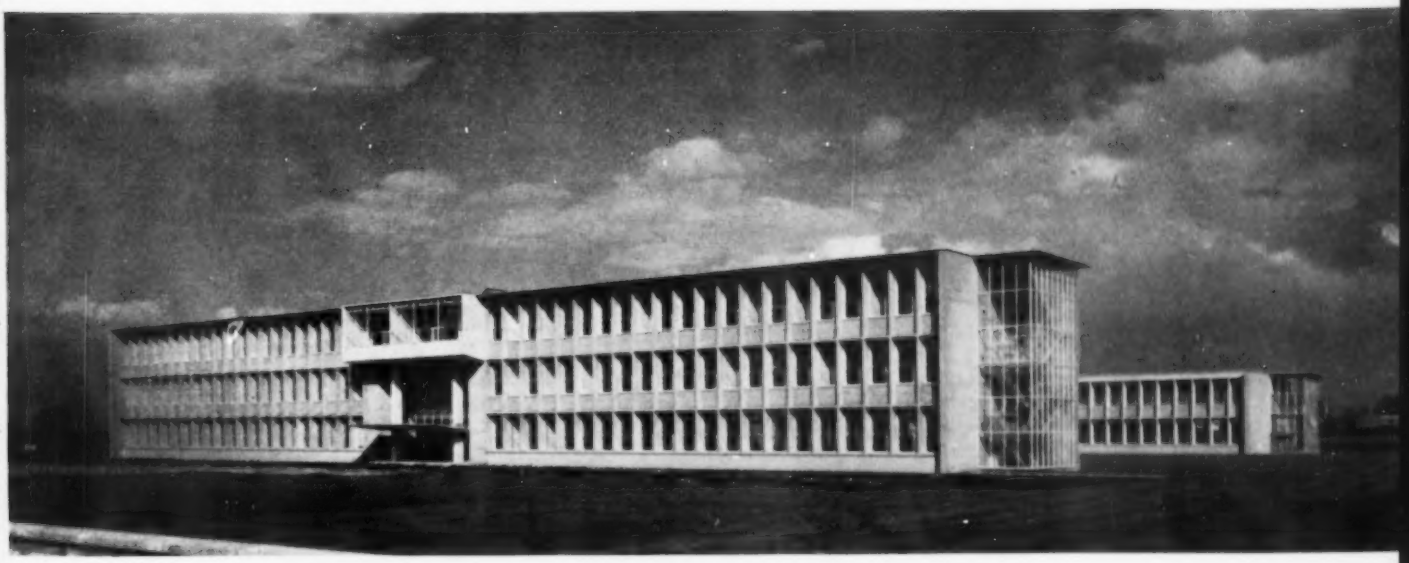
About 150 flagons, tankards, standing-cups, mazers, tazzas and candlesticks, mostly lent by parishes in every part of the country, will be exhibited. They include some of the most important pieces in existence as, for instance, the well-known parcel-gilt cup and cover of 1450 from Lacock, Wiltshire, the superb Boleyn cup of 1535 from Cirencester and the very rare Gothic cup supported on figures of dogs and dating from the early fifteenth century belonging to Marston, Oxfordshire: there will also be a wide range of other pieces demonstrating the art of the silversmith from the fifteenth to mid-nineteenth centuries.

The exhibition will be held in the Great Rooms of Messrs. Christie's, the famous firm of art auctioneers, 8 King Street, St. James's, S.W.1, from January 5 to 30; it will be open daily from 10.30—6.30 (Sundays from 2.30—5.30) and the charge for admission will be 2s 6d (after 5 p.m. 1s 6d). The entire proceeds, after deduction of expenses, will be given to the Historic Churches Preservation Trust to aid the task of raising £4,000,000, the amount needed within the next few years to help needy parishes in every part of England with the restoration of their historically important churches.

Anyone wishing to support the Trust's work or desiring further particulars should write to the Secretary, Historic Churches Preservation Trust, Fulham Palace, London, S.W.6.

One-day Builder/Fixers Courses at the C.U.C.

One-day courses for builder/fixers will be held at the Coal Utilization Council's Information Centre, St. Peter's Gate, Nottingham, on December 14 and 15, and thereafter at the rate of two a month. The basement has been prepared as a demonstration and lecture room for the training of builders in the correct installation of modern improved domestic solid fuel appliances, and the courses have been arranged following consultations with the Federation of Building Trade Employers and the Nottingham and District Master Builders' Association who have recommended the courses to their members.

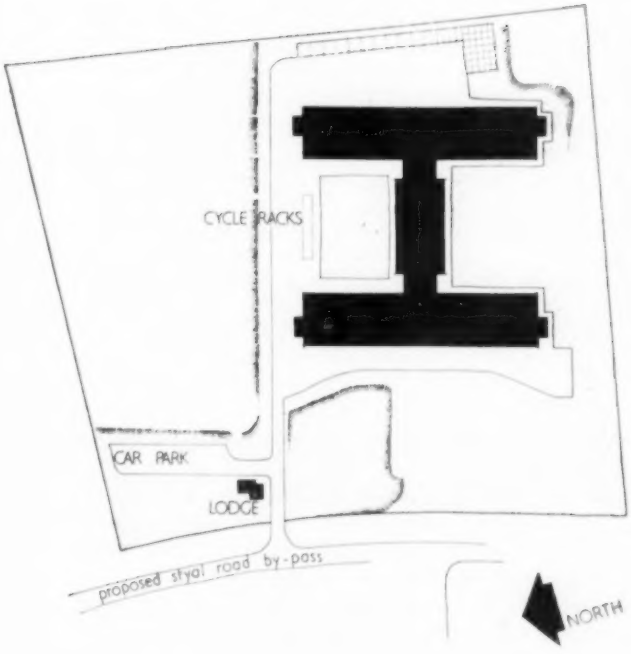


View from South-West of front block

ADMINISTRATIVE OFFICE BUILDING, WYTHENSHAWE

for the Renold & Coventry Chain Co., Ltd.

Architects: CRUICKSHANK & SEWARD



BLOCK PLAN

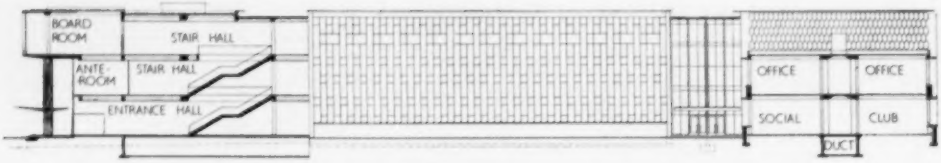
THE clients' decision to build new office headquarters arose primarily from their need for additional workshop space in their Manchester factory. Their old offices, forming part of the Works' Building, were suitable for conversion to production space, and it was decided to take these over and transfer the office staff of six hundred to a new building. This has been erected in the Wythenshawe area, nine miles from the city centre.

The scheme is sited at the junction of the Styal and Ringway roads, which connect Manchester's principal airport to the centre of the city. The building forms the terminal feature of Ringway Road, and is planned symmetrically about its axis. It is set in extensive gardens, which have been partly completed during the period of building. All the rooms overlook lawns and fine views of the Derbyshire Hills are obtained from many of the offices.

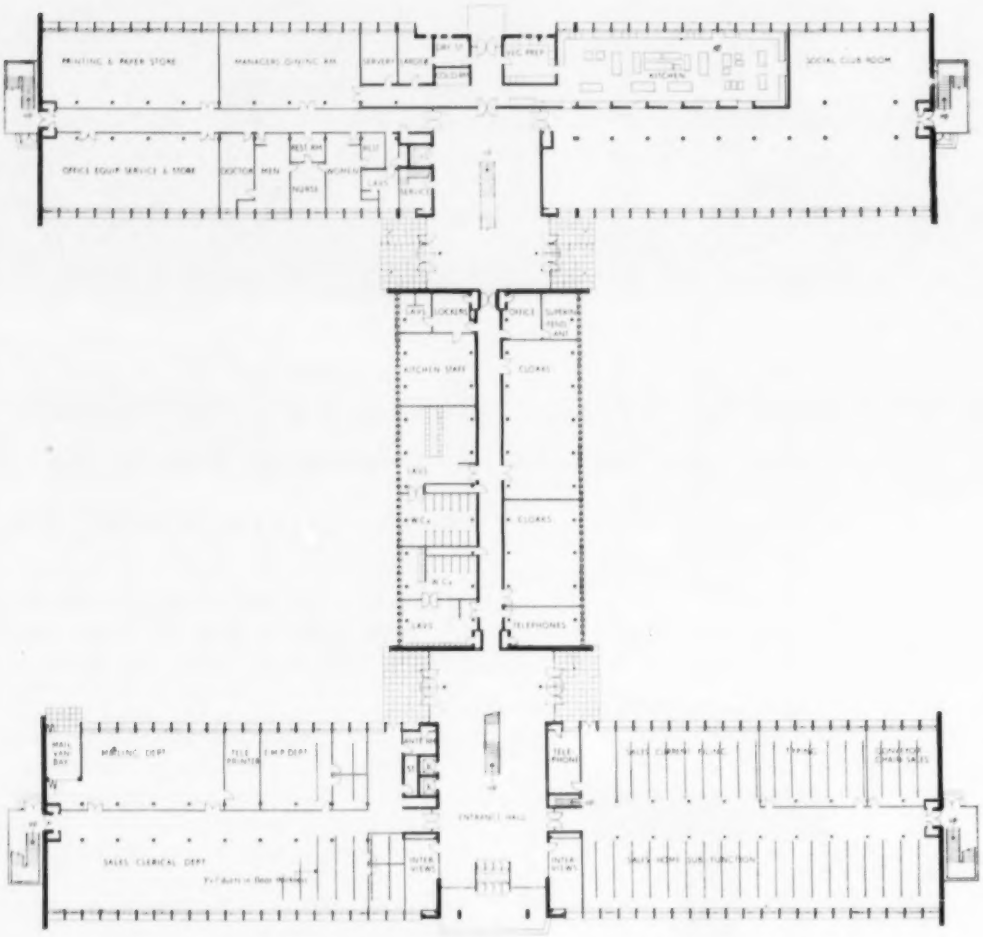
The plan is in the form of an "H," the two parallel wings containing general and private offices, and the centre wing principally containing accommodation such as Filing and Records Rooms, Stores, Cloakrooms, and Lavatories. A suite of rooms for Directors' meetings is contained in the cantilevered structure above the Main Entrance.

The front and centre wings are three storeyed; although the rear wing has only two floors, it is designed for the addition of a further storey at a later date.

An important requirement in planning was flexibility of internal layout. For this purpose, each wing has an



CROSS SECTION, EAST-WEST



GROUND FLOOR PLAN. Scale: 1in = 56ft

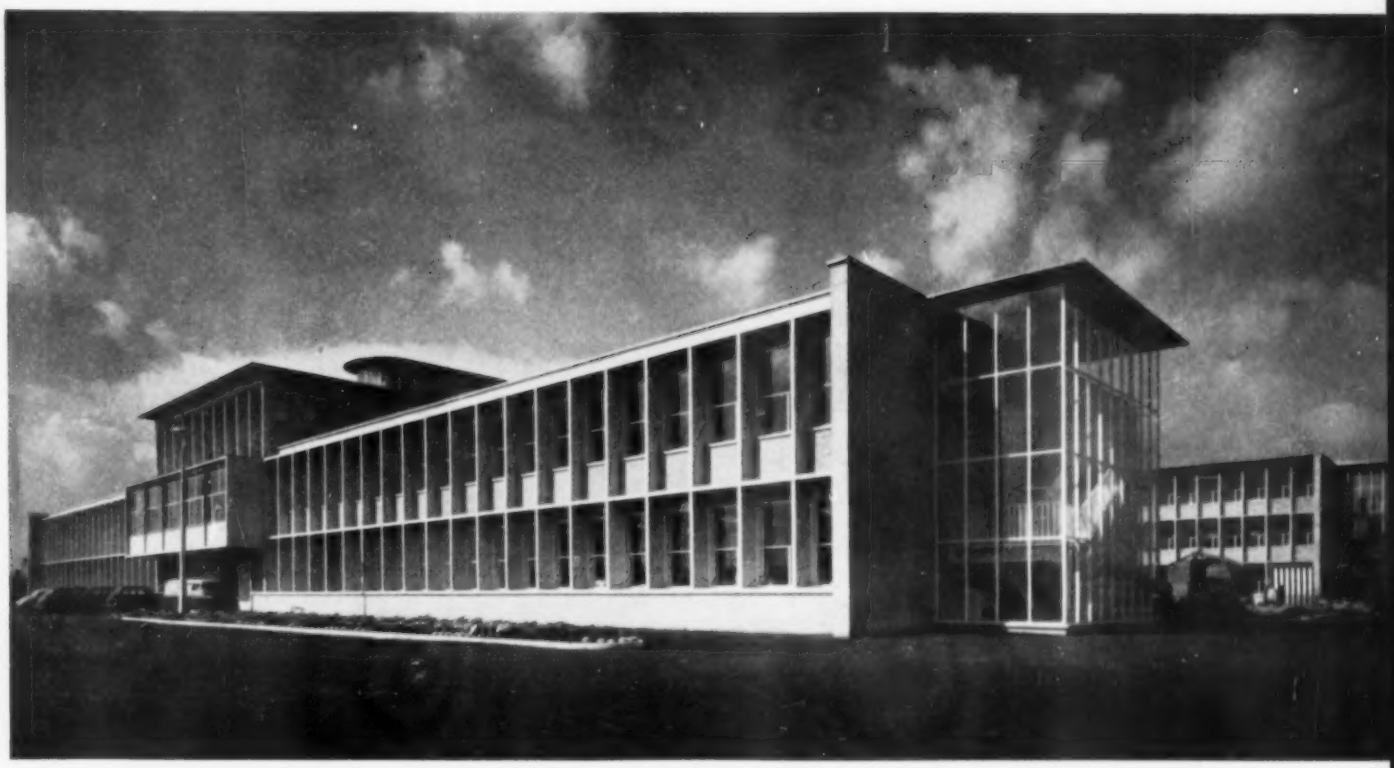
Office Building, Wythenshawe

uninterrupted level ceiling, to allow the sectional partitions to be rearranged in any desired layout. Telephone and electrical services are brought to the desk positions by concealed floor channels, which correspond with the standard layout of desks at 6ft centres.

The layout of the office desks also determined the structural grid. The vertical reinforced concrete fins are spaced at 6ft centres, their cross sectional area being 3ft 3in by 5in. The latter width was found to be the minimum practicable dimension for efficient jointing and was also considered to produce a suitable proportion architecturally.

All the framing, floors, roofs, and staircases, etc., are of *in situ* reinforced concrete, the construction being freely expressed in the elevations. The two office wings have façades of the honeycomb type, in which structural vertical and horizontal fins contain deeply recessed window panels. The treatment was chosen, æsthetically speaking, for its bold texture and strongly rhythmic effect; structurally, it possesses a high resistance to

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The rear block

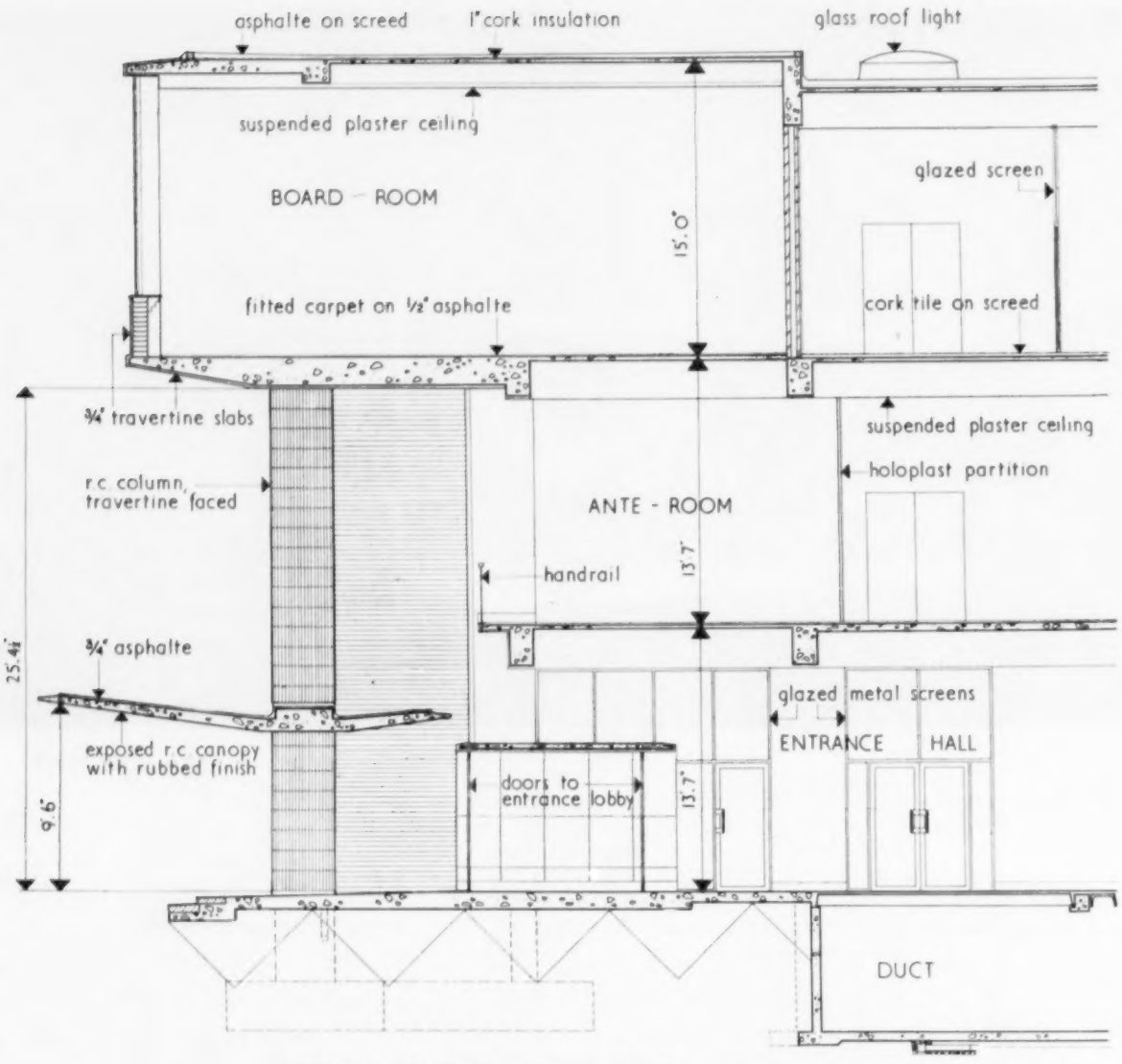


FIRST FLOOR PLAN



SECOND FLOOR PLAN

Scale: 1in = 80ft



SECTION THROUGH MAIN FRONT Scale 1in = 8ft.

Office Building, Wythenshawe

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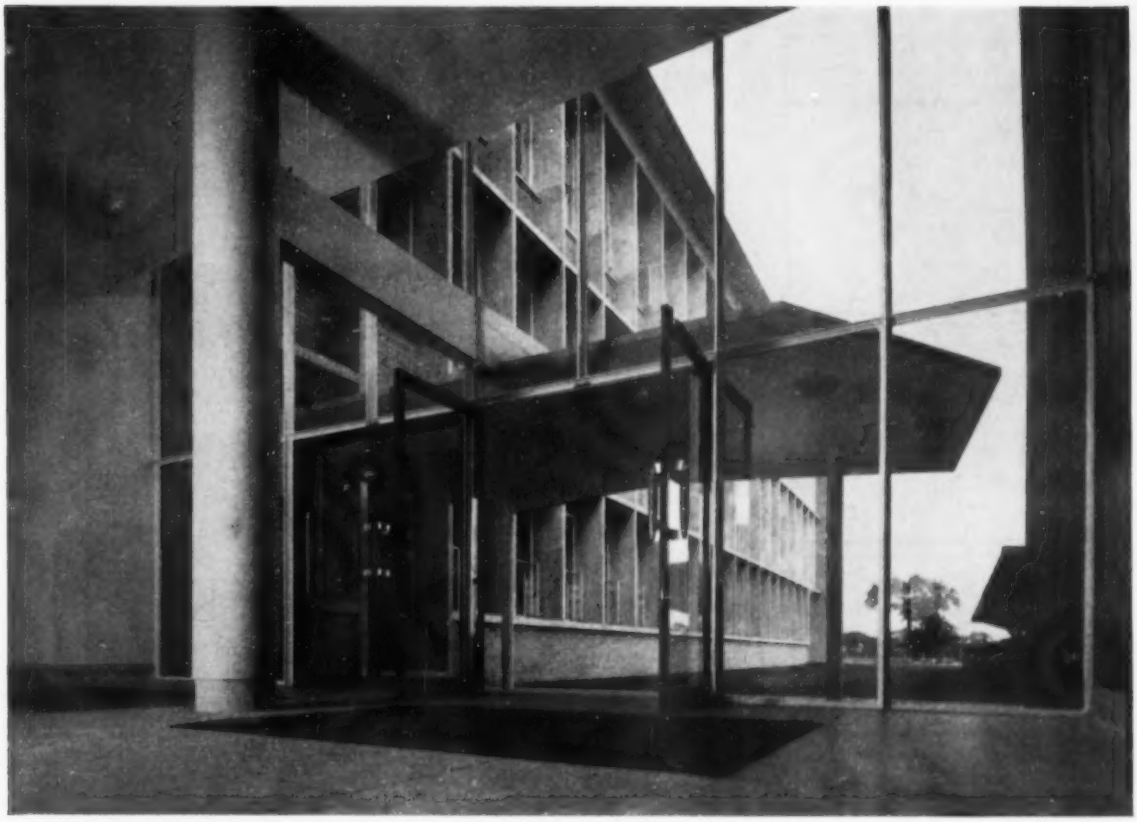
wind pressure and eliminates the transfer of large moments to the flooring system.

A contrasting architectural expression was given to the centre wing. Here, the principal façades consist of glass block walls standing in front of the structural framework. Each wall is 120ft long by 36ft high, and to obtain pattern and scale, is sub-divided by mullions and transomes of precast reinforced concrete; the latter, which frame opening windows, are attached to the edges of the cantilever floor slabs. The centre wing is separated from the front and rear wings by fully glazed towers, which light the principal staircases.

Generally, external walls are built of golden-brown hand-made bricks, contrasting in colour and texture with the exposed concrete members. The small recessed panels under the office windows have continuous perpends, emphasized by raking. Brickwork is used internally in the secondary stair towers, the staircases being bracketed from the end framing of the wings and riding clear of the walls to reveal the full sweep of the brickwork through the glass.

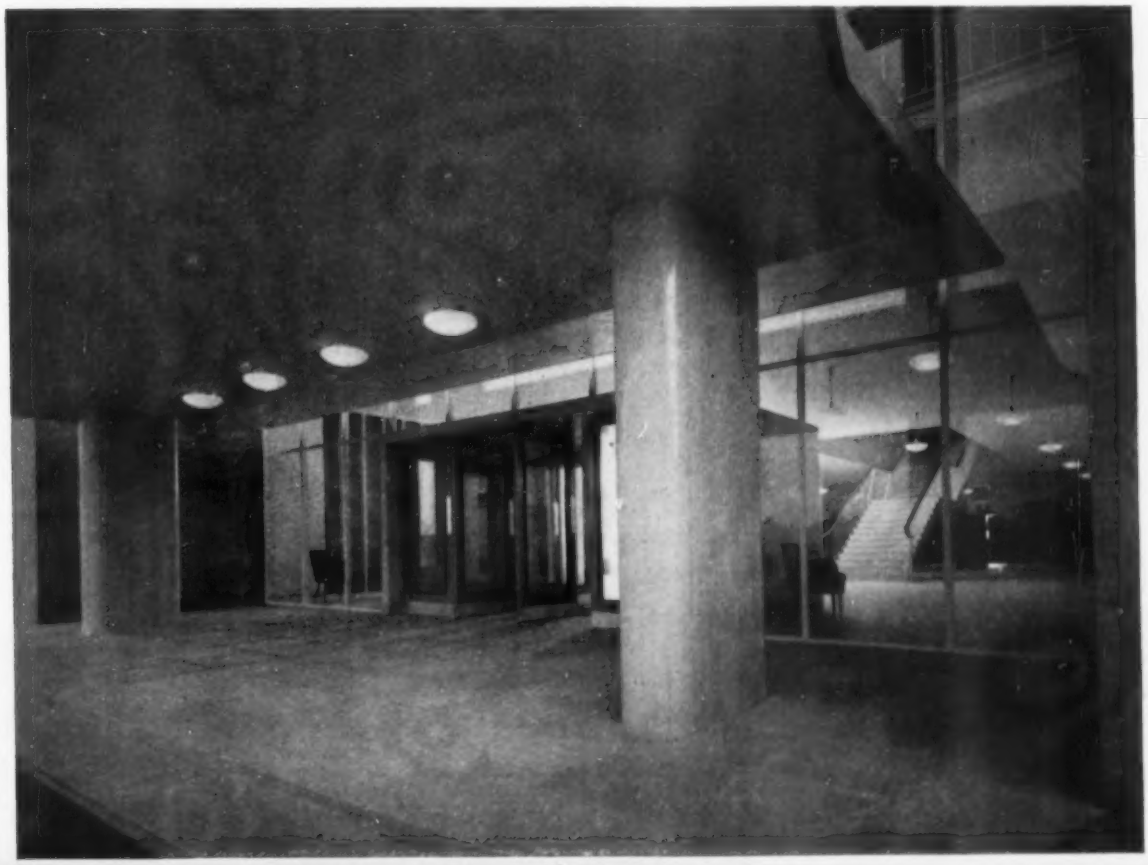
The projecting structure above the Main Entrance, which houses the Board Room suite, is lined internally with cream travertine. This material is also used to face the two external supporting columns and the " box " which contains the entrance doors. Elsewhere, the external reinforced concrete has a natural, rubbed-down finish, with some colour treatment at focal points. In the rear wing, two large areas of concrete walling provide a field for decorative treatment. An overall, recessed

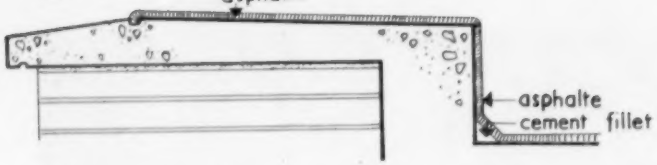
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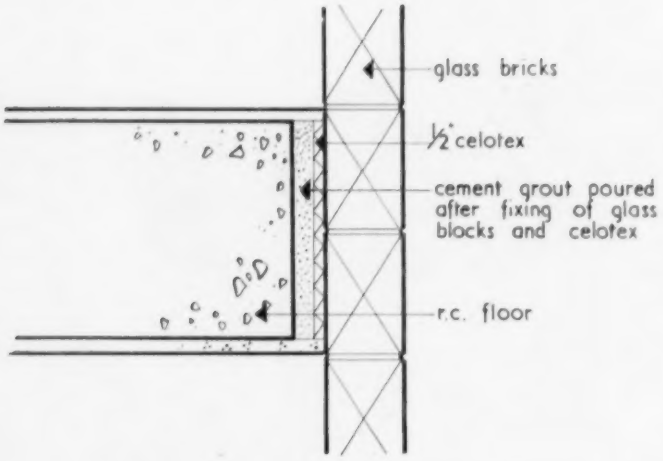
Secondary entrance and canopy from main entrance hall

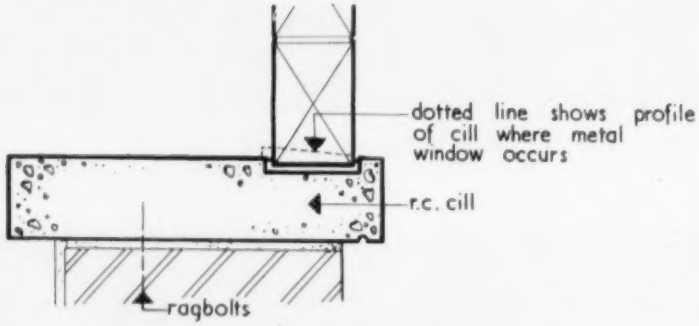
Main entrance

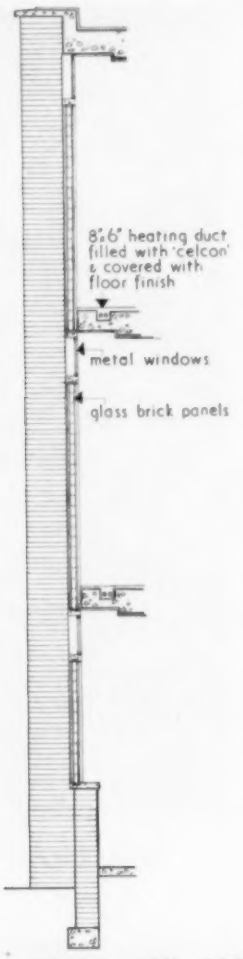




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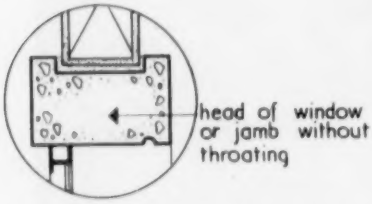




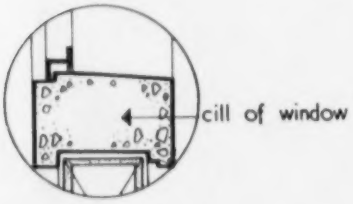
SECTION. SCALE: 1IN=8FT

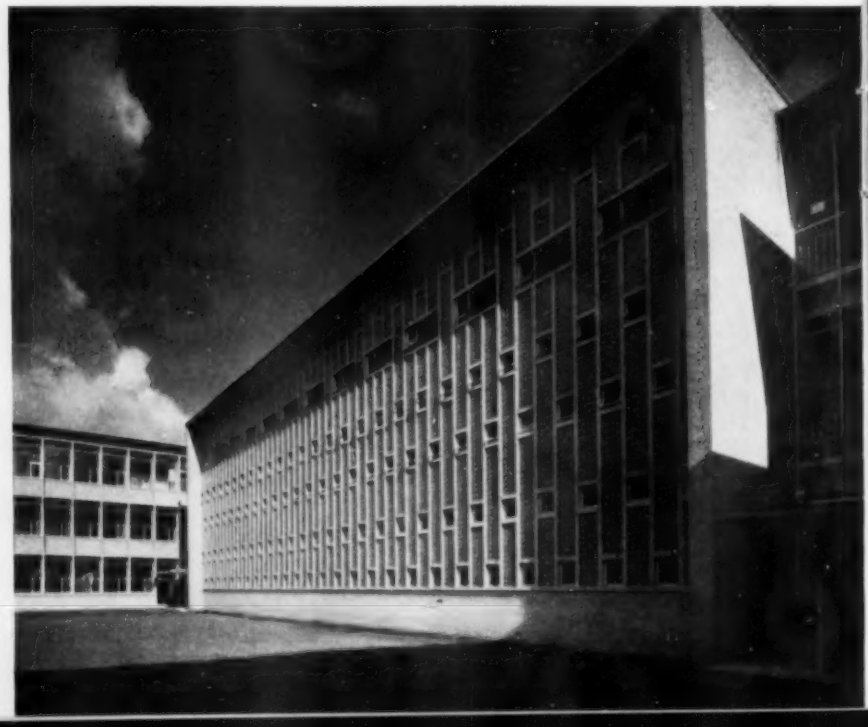
Centre Wing

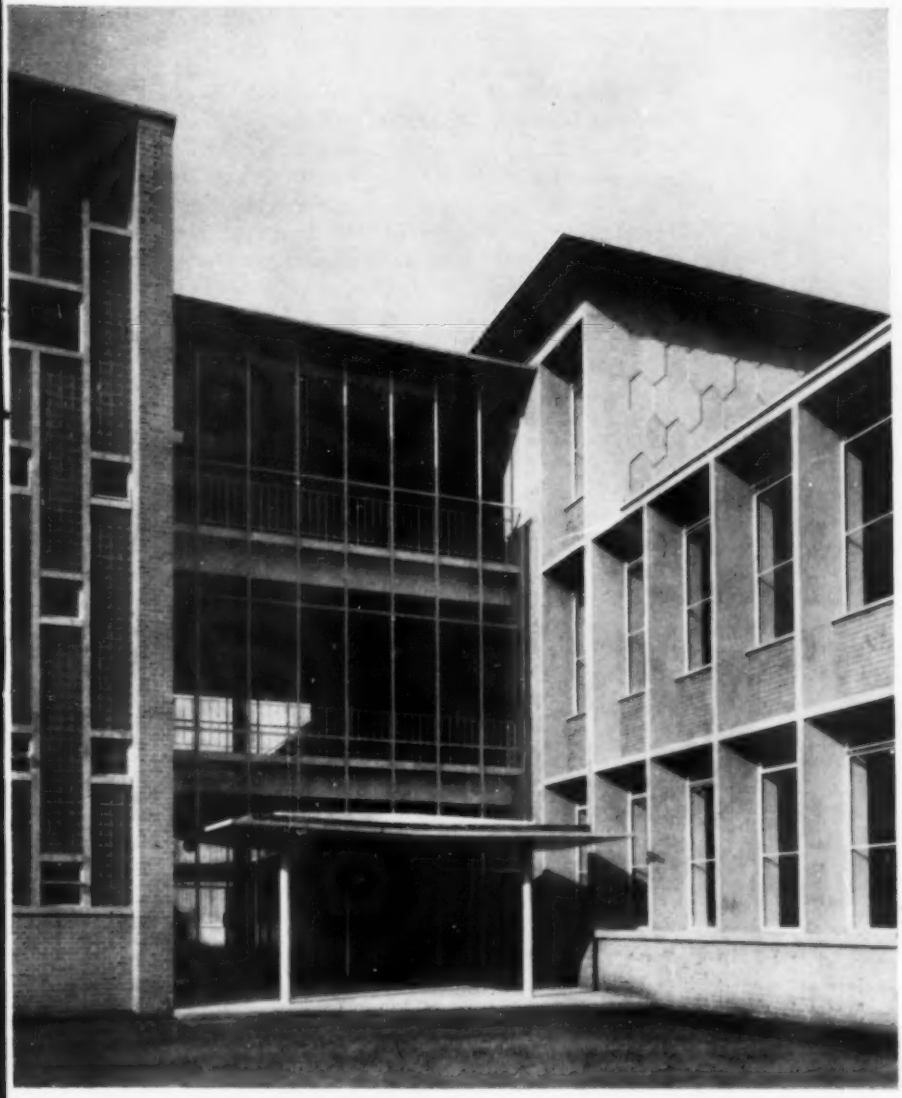
CENTRE WING
WINDOW DETAILS
AND GLASS BRICK WALL



SCALE: ½IN F.S.







Rear Staircase Hall

General Contractors:
J. Gerrard & Sons Ltd.

Architectural Metalwork: Duxbury Hartley & Co., Ltd.
Asphalte Roofing and Asphalte Tile Flooring: Limmer & Trinidad Lake Asphalte Co., Ltd.
Board Suite Furniture: The Bath Cabinet Makers and Aircraft, Ltd.
Bricks—Facing: Tucker & Co., Ltd.
Electrical Installation: W. J. Furse & Co., Ltd.
Glass Block Walling: J. A. King & Co., Ltd.
Goods Lift: J. & E. Hall, Ltd.
Heating Installation: Dodd Engineering Co., Ltd.
Ironmongery: Laidlaw & Thomson
Joinery and Internal Wood Screens: J. Gerrard & Sons, Ltd.
Kitchen Equipment: Falkirk Iron Co., Ltd.
Lifts: Waygood-Otis, Ltd.
Mirrors: Charles Lightfoot, Ltd.
Paint: Mander Bros.
Partitions—Internal: Holoplast, Ltd.
Reinforced Concrete: Truscon Floors, Ltd.
Sanitary Fittings: Shanks & Co., Ltd.
Sliding Door Track: E. Hill Aldam, Ltd.
Sliding Folding Doors: The Bolton Gate Co., Ltd.
Suspended Ceilings: Beaumonts, Ltd.
Travertine Linings: J. H. Patteson
Wall Tiling and Terrazzo: Conways, Ltd.
Windows & Doors—Metal: Doodson & Bain, Ltd.

Office Building, Wythenshawe

Continued from page 718

pattern has been formed on their face, by attaching shaped panels to the sheeting, and this pattern is emphasized by colour.

Clear, bold colours, are used widely in the building, being used to provide a bright and buoyant atmosphere, and, in a more restricted sense, to define structure. The roof structure of each rear secondary stair towers, for example, which consists of a cantilevered, folded slab, has its planes defined by contrasting colours.

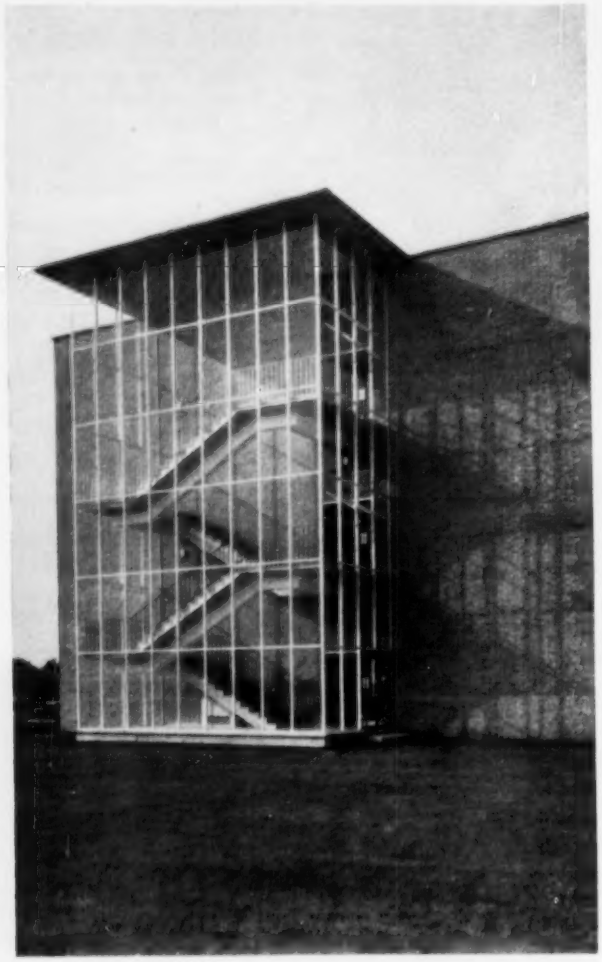
Terrazzo is used for the floors and staircases of the main halls and landings, thermoplastic tiles are used for secondary halls, and coloured asphalt is employed in the Canteen. Office floors consist of linoleum on a ¼in asphalt underlay. Rooms in the Board Suite are close carpeted, and the approach corridor in this area has a cork tile finish.

Heating, hot-water and steam are supplied by a main electro-thermal storage system utilizing power at "off peak" periods. The systems generally use electricity for the thermal charging of the storage vessels during night "off peak" periods and adequate storage is provided to meet a full day's demand for heat, steam and hot water, with facilities to permit boosting during day "off peak" hours if required during severe weather.

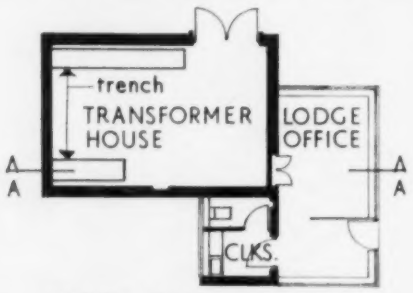
Some 30,000 gallons of water at 250°F is stored in storage vessels for central heating and is supplemented by an 800 kW electrode boiler for boosting purposes. High-pressure water at 150 p.s.i. is stored to supply

steam in the kitchens and is charged by an automatic electrode steam-raising unit. Smaller storage vessels supply hot-water services throughout the building.

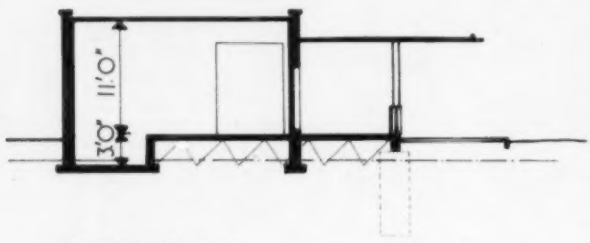
Concealed convector heating is utilized through the building involving the use of over 500 individual convector units. By a system of electrically operated mixing and control valves, the entire heating system is automatically maintained at a predetermined outgoing water temperature as determined by a master weather-compensated thermostat which ensures a constant room comfort temperature irrespective of weather conditions. Further zonal temperature control is also incorporated to offset occupational and solar radiation heat gains.



Staircase tower, front wing.

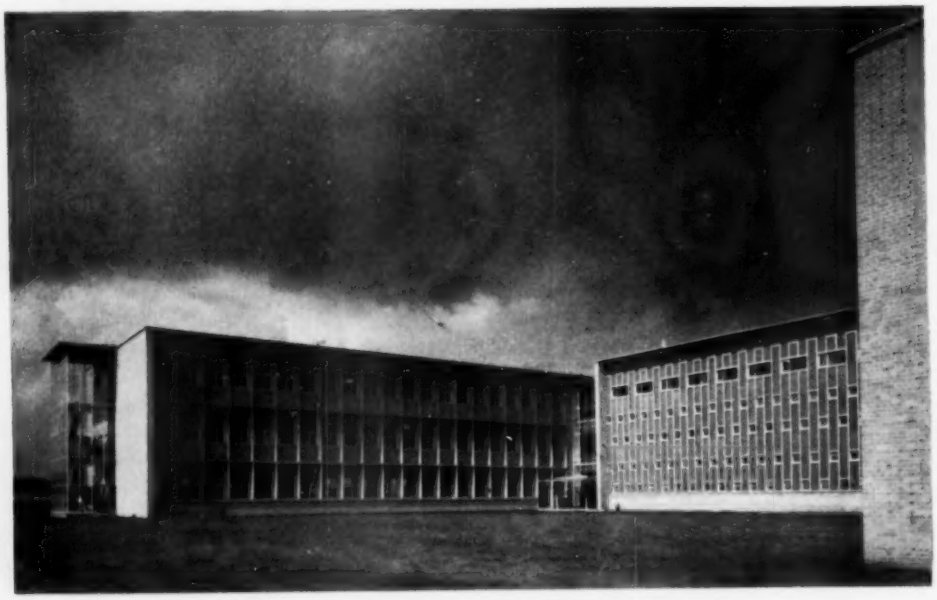


PLAN. Scale: 1in = 16ft

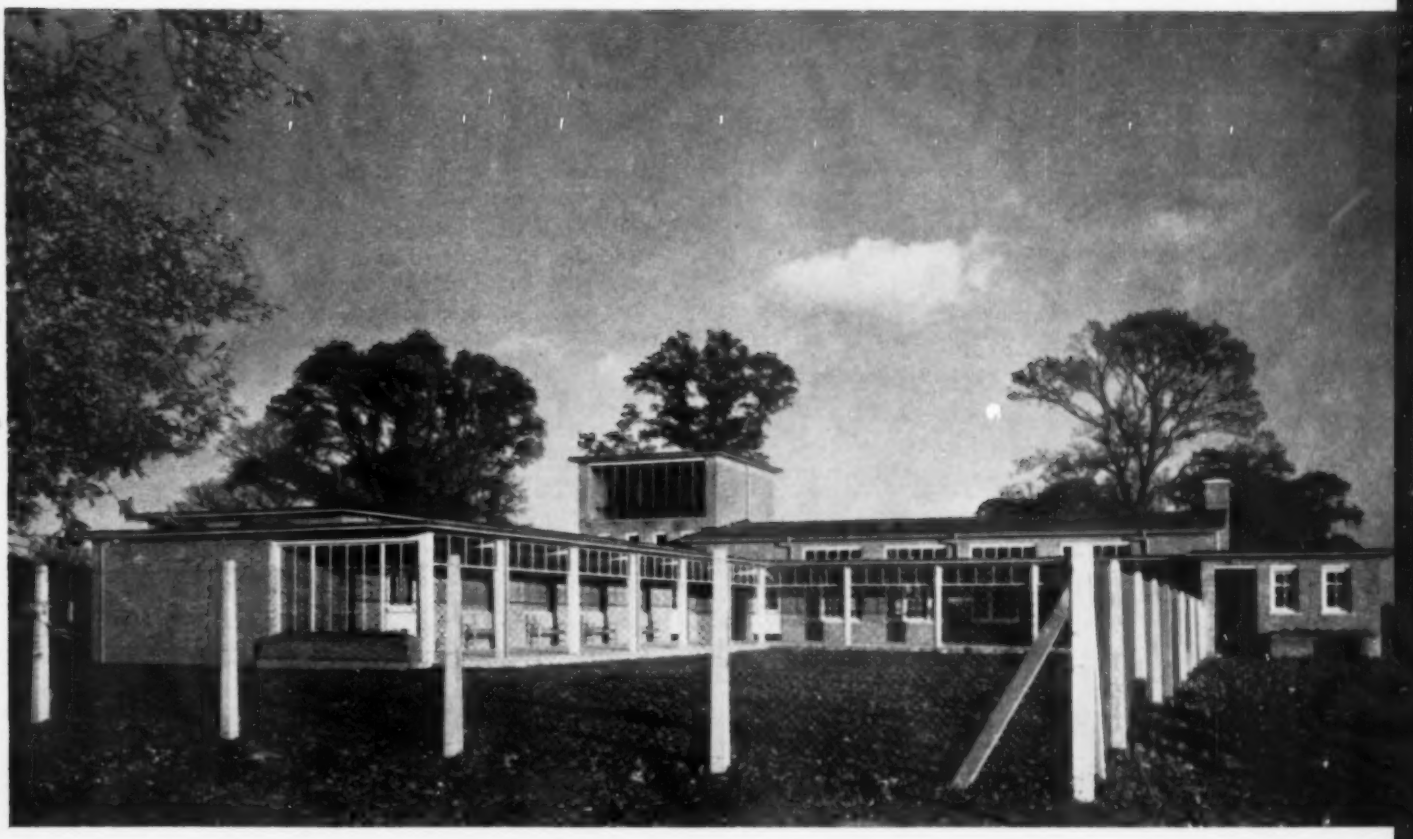


SECTION A-A
LODGE AND TRANSFORMER HOUSE

Office Building, Wythenshawe



Front and centre wings from South-east.



HOSPITAL EXTENSION, LITTLE PLUMSTEAD

for the East Anglian Regional Hospital Board

GUY ALDIS, A.R.I.B.A., A.A.Dip., Architect to the Board

THE villa was designed to provide accommodation for 52 lowest-grade mentally deficient patients and to afford the maximum amount of ease for the nurses, whilst at the same time reducing the number of nursing staff required to the minimum. The type of patient to be catered for demanded that the finishes should be extremely hard-wearing and that the toilet arrangements should be ample, thus operating with the least possible fuss. It also had to be borne in mind that the toilet area would have to be hosed down at fairly frequent intervals.

At the outset consideration was given to the possibility of supervising all patients at night by one nurse only, thereby easing the staffing problem. This has been achieved, a nurse being housed in a kiosk which can be locked and from which all electrical switches are operated.

The sliding and folding partitions in the dormitories will be kept locked during the day (the building being used on its north/south axis) and flung wide-open when the patients are put to bed (axis changed to east/west). The sliding and folding partitions in the day room serve the multi-purpose of enabling quiet and noisy patients to be segregated, a separate dining area and, on some occasions, provide privacy for patients when meeting their parents.

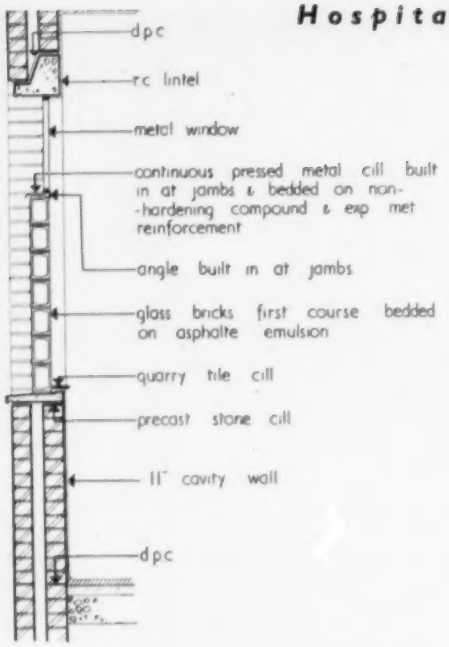
The plan was devised after lengthy research into the habits and requirements of this particular type of patient and, it must be said, signals a radical departure from the type of plan which for a long period was recommended by the Board of Control.

In detail, the glass-brick and metal windows in the dormitory were decided upon, after lengthy discussion with the medical authorities, in the hope that the maintenance cost of reglazing could be cut down and privacy provided to those patients in the dormitory whilst, at the same time, allowing adequate ventilation and daylight.

In the day room, on the other hand, traditional wood double-hung sashes with clear glass were used, with centre-hung clerestory lights over.

The dormitory and day room have radiant-heated floors, this particular form of heating being a medical request, and the remaining rooms are heated by low-temperature heating panels. Crawlways and floor ducts have been constructed to carry the service mains, and all pipes have been placed in vertical chases to stop inter-

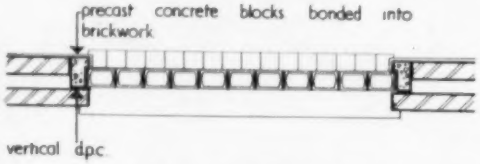
Hospital Extension, Little Plumstead



ference by destructive patients. The heating chamber is in the basement, housing cast-iron sectional boilers having automatic stokers.

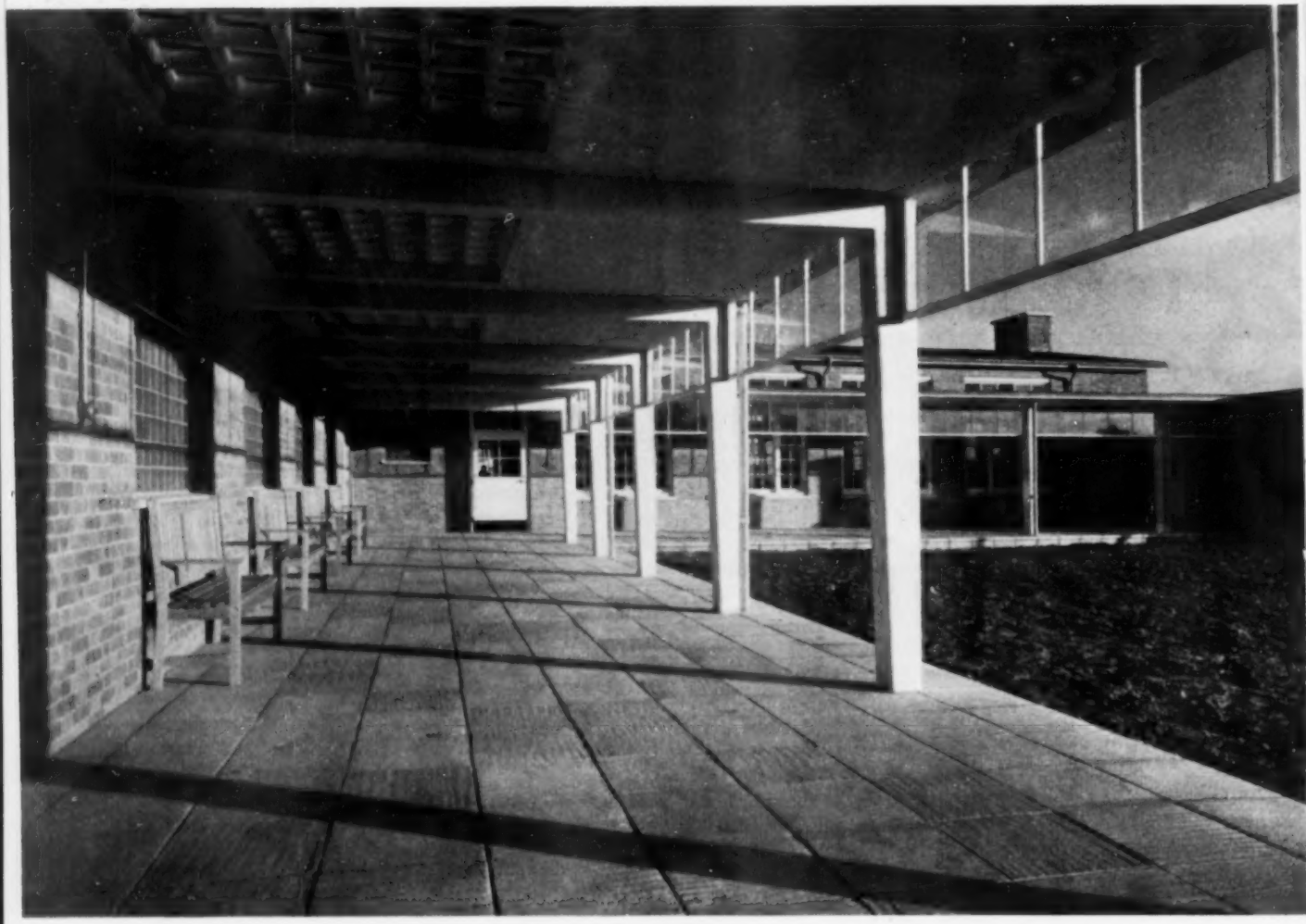
Construction

The walls are constructed of 11in cavity and 13½in solid load-bearing brickwork with reinforced concrete roofs over the sanitary blocks, dormitory and kitchen block. The day room has a copper roof on wood-wool slabs supported on eight steel trusses. The concrete roofs are insulated with 2in wood-wool slabs and foam



DETAIL OF WARD GLAZING
Scale: 1in – 3ft

A Verandah



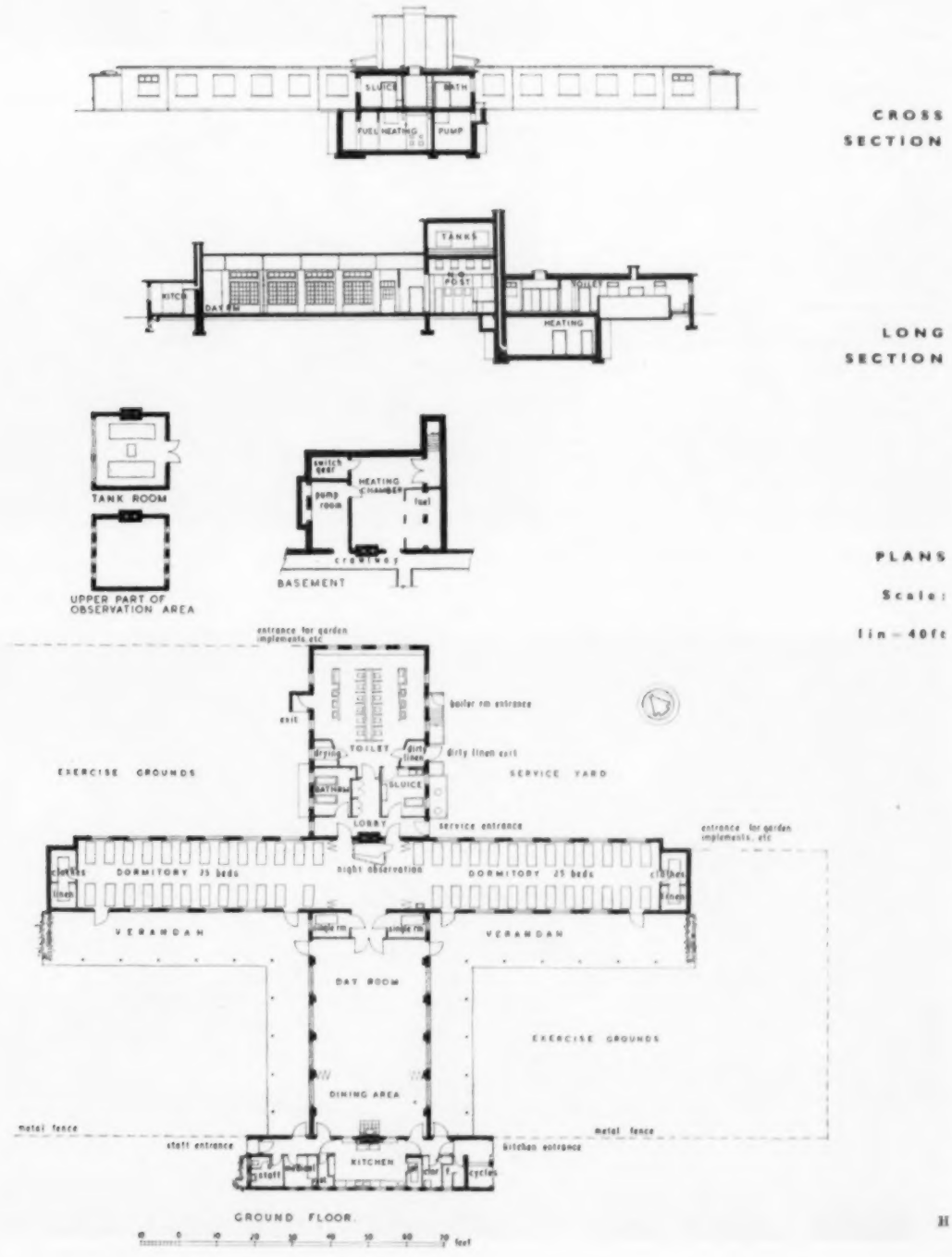
slag screeds; the roof finish being three-layer bituminous roofing. The roofs over the verandah are reinforced concrete supported on half portal frames.

The ceiling over the day room is suspended from the metal trusses and consists of ¾in insulation board, with chamfered edges, in 2ft × 2ft panels The remainder of the ceilings are plastered.

The floors generally are 9in × 9in × $\frac{3}{16}$in thermoplastic tiles, except the kitchen and toilet block, which have 9in × 9in × $\frac{7}{8}$ in heather-brown quarry tiles.

Genera

The contract price of £80,443 16s 7d (including abnormal and outside works) is for the construction of two villas, one each for male and female patients. The villas are identical in design and construction, except that minor modifications have been made in the respective toilet areas to cater for the different sexes. Work commenced on the villas in April, 1953, and the first villa, for male patients, has been completed and was occupied in November, this year.



Hospital Extension, Little Plumstead

General Contractor :
T. Gill & Son (Norwich) Ltd.

Asphalte Tanking and Floors:
The Lawford Asphalte Co., Ltd.
Bituminous Roofing Felt:
Standard Flat Roofing Co., Ltd.
Bricks (Facings):
Builders Direct Supply Co., Ltd. (Norwich).
Bricks (Commons):
London Brick Co., Ltd.
Central Heating:
G. N. Haden & Sons, Ltd.
Copper Roofing:
W. J. Taylor (Norwich).
Damp-courses, Ledkore Grade B:
Messrs. Callenders.
Electrical Installation:
P. H. Allin & Sons (Cambridge).
Ironmongery:
N. F. Ramsay & Co., Ltd.
Joinery and Sliding and Folding Partitions:
T. Gill & Son (Norwich), Ltd.
Locks:
Wing & Webb, Ltd.
Metal Trusses:
Cocksedge & Co., Ltd.
Metal Windows and Patent Glazing and Dome Lights:
Mellowes & Co., Ltd.
Quarry Tiles:
Denis Ruabon, Ltd.
Reinforcement:
Trussed Concrete Steel Co., Ltd.
Roof Lights:
J. A. King & Co., Ltd.
Sanitary Fittings:
Adamsez, Ltd.
Suspended Ceilings:
Sundeala Board Co., Ltd.
Terrazzo Partitions:
Jaconello, Ltd.
Thermoplastic Tiles:
Holmes (Norwich), Ltd.



Kitchen



Day room

Dormitory



IN PARLIAMENT

Housing Intentions

The Government has promised, in the Queen's Speech which opened the new session of Parliament on Nov. 30, to "ensure the continuance of a high rate of house building for letting and for purchase." They are now able, it was stated, to resume an active campaign to clear the slums; and in addition legislation will be introduced to deal with problems connected with requisitioned dwellings and other housing matters.

A Builder's Criticism

This passage received scant attention in the opening debate. One of the few M.P.s to comment on it was Mr. George Porter, the Labour member for Leeds, Central, who said that he had spent most of his life in the building industry.

The Government were talking about the wonderful development there had been in house building during the past two years, he said, but what they had gained on the swings they had lost on the roundabouts, for the building labour force had not been materially increased. They had only been able to build more houses because of the transference of building labour from other essential jobs to concentrate on house building. Most of the foundations for the houses had been laid when the Labour Party was in power.

The type of house now being built was inferior to that being erected when the Labour Party went out of office. One of the first things the Government had done was to take six inches off at roof height, which meant that two double courses of bricks were being saved on each house. He had asked the Minister about the savings involved in the new family-type house. The reply he had received was that the quantity of bricks required varied widely according to the extent to which substitutes were used. But everyone knew that when the substitutes were used the house ceased to be traditional. Another point which he had thought might be of value in determining the relationship between the new and old type of house was the saving of money and time involved in the abolition of joinery work eliminated from the present type. But the Minister had regretted that such information was not available, although he must have known the purpose for which it was required and had been determined that it should not be obtained.

He had, however, learned that three-bedroom houses constituted 80.4 per cent of all houses being built by the Labour Party in 1949, but that type only represented 67.9 per cent of building in 1953. The two-bedroom type represented only 11.1 per cent under the Labour Government, but under the Conservatives it had become 23 per cent. If the Government were using subterfuges of that kind—that the type of house was not as good as that being built under the Labour Government, and that they had a reasonable groundwork laid by the Labour Government on which their houses could be built—there was no reason why they should not take credit for the present state of affairs. He did not agree that the Labour Government, with their balanced programme of houses, plus schools, hospitals and factories, were not making a better contribution to the nation's social life than the present Government were doing or had been doing by concentrating on house building.

The Government could do more if they had more money at their disposal. They now were confronted with the question of the amount of capital investment allowed for house building. When the Government took credit for what they had done they should take into consideration what the Labour Government had done to enable them to build those houses, and also bear in mind that they had starved the building industry in other respects in the interests of house building. The entitlement of most people to a house was determined only by need and not by pocket. Although the Labour Government, when they went out of office, were building fewer houses than were now being erected, a smaller proportion of that greater number would go to the people who most needed them.

Slum Clearance Claims

Mr. James Simmons said that the Minister of Housing and Local Government had issued an order for the handing back of derequisitioned houses. His wife was chairman of the housing management committee in Birmingham, where there were 50,000 on the waiting list. The committee had been requested by the Minister to hand back "prefabs," and to hand back requisitioned houses. That meant that if Birmingham were to do everything which the Minister wanted, no ordinary applicant would get a house for the next three or four years because all new houses would go to priority claims, such as tuberculosis cases. The Government ought to give power to local authorities, not only not to hand back houses, but also to requisition all other houses which stand empty for more than a month.

Mr. Manuel, expressing a Scottish viewpoint, described the Government's proposals for house building as not making sense. If, he said, there was a high rate of house building both for letting and purchase, the slums could not be cleared away as one would wish. If Ministers were to allow half the houses built to be used for letting they would not move one step towards clearing slums in Scotland, and there would be terrific opposition from local authorities beyond the border if the proportion of houses to be built for purchase was considerable. The housing problem in Scotland was so immense that it would be a tragedy for families living in the most appallingly overcrowded conditions to be denied the chance of a decent home because those with money could jump the queue.

* * *

Development Plans Approved

Up to the end of November, 1954, the Minister of Housing and Local Government had approved Development Plans submitted by the following County Boroughs and County Councils: Barrow-in-Furness C.B., Berkshire C.C., Birkenhead C.B., Blackburn C.B., Bootle C.B., Bucks C.C., Burnley C.B., Burton-on-Trent C.B., Bury C.B., Cambridge C.C., Canterbury C.B., Cardigan C.C., Carlisle C.B., Cheshire C.C. (Part I), Chester C.B., Croydon C.B., Darlington C.B., Dewsbury C.B., Doncaster C.B., Durham C.C., Exeter C.B., Gateshead C.B., Gloucester C.B., Gt. Yarmouth C.B., Grimsby C.B., Huddersfield C.B., Huntingdon C.C., Ipswich C.B., Isle of Wight C.C., Isles of Scilly C.C., Kingston-on-Hull C.B., Lincs (Holland) C.C., Lincs (Kesteven) C.C., Lincoln C.B., Middlesbrough C.B., Montgomery C.C., Newcastle-on-Tyne C.B., Oldham C.B., Oxfordshire C.C., Preston C.B., Radnor C.C., Rochdale C.B., St. Helens C.B., South Shields C.B., Suffolk East C.C., Suffolk West C.C., Sunderland C.B., Sussex West C.C. (Part I), Sussex West C.C. (Part II), Tynemouth C.B., Wakefield C.B., West Hartlepool C.B., Westmorland C.C., Wigan C.B., Worcester C.B.

The Secretary of State for Scotland has approved, with minor modifications the Levenmouth area Development Plan of the County of Fife. This is the 11th Development Plan approved in Scotland under the Town and Country Planning (Scotland) Act 1947.

Students Visit Poplar

Twenty students from 15 countries, now studying in London, took part in a survey on "Life in an East London Neighbourhood," arranged by the British Council, in Poplar, from November 29 to December 18. The survey consists of lectures and visits designed to demonstrate the life of people living in the Borough of Poplar and particularly in Lansbury, the first of the self-contained neighbourhoods built under the London County Council plan for the reconstruction of East London. The national, municipal and voluntary services are being studied in their application to a dockland area and Lansbury considered in relation to pre-war Poplar.

The overseas students are all taking university or other courses in London and the lectures and visits are arranged to fit in with their studies.

The students, who pay their own expenses, come from British Guiana, Ceylon, Egypt, Germany, Greece, Indonesia, Iraq, Italy, Japan, Kenya, Malaya, Puerto Rica, Sudan, the United States and Yugoslavia.

THE EVERLASTING TYPE PLAN

MANY housing authorities are at last giving thought to redeveloping the worn-out centres of their boroughs and urban areas. Many see that the solution to their housing problem is within sight and realize that unless they begin to pull down many of the buildings which are either derelict or have been condemned and left vacant, these eyesores may stand as monuments to a lost opportunity for many years to come.

Recently I had the pleasure of discussing what should be done with a derelict area in the centre of an old and historic borough. I was amazed to hear the chairman of the housing committee comment that the site called for a specially designed group of houses. Any architect who knew the site would have agreed with him, but as it was unusual to hear this remark from a layman I pressed him for his reasons.

"Architects look upon housing schemes from two angles, fees and numbers per month," was his criticism. The same plan and elevation could often be seen in many areas where the same architect operated. There is no denying his criticism is not altogether groundless. Now the rush in some areas has lost its tempo the councils are beginning to weary of the type plan. There is no doubt it had its use but it has been overdone. It is bringing contempt upon the profession from the lay public.

Councils are beginning to be a little more choosy, a state of affairs which can be beneficial to architecture in its broadest sense. Naturally, when a member of a town council has looked forward for years to being a party to removing one of the black spots in his town and he sees that this long-cherished goal is about to be achieved, he rightly wishes to see something better, something more of a monument to the achievement of this idea than that pair of "semis" that can be seen in his borough and also the surrounding district. He is, to put it bluntly, fed up with that type of plan. Ask him what he desires for the site and he may be in difficulties but he does know what he does *not* want to see.

What the outcome of this antagonism to present housing is going to be is difficult to forecast. Councils who at present employ private architects may turn to engaging a whole-time architect and staff with the idea that they can then instruct him. Alternatively, they may wish to change their architect. This, on the face of it, may appear to be the simplest solution. From the council's point of view they will no doubt enquire how they could be sure that they would not just get another type plan. Would the architect really design a plan to fit the site or merely assemble various type plans of housing units to fit the ground?

You may say I am painting too gloomy a picture of the position. I doubt it, but suggest that it is better to paint the picture before it is really too late.

I can hear you saying that if you were given the chance you would design the council a plan to fit the site. I know you would. The council's answer is, "Well, why haven't architects done this instead of dishing up the same old plans? You've had your chance and in many cases not taken it. How do we know that a new broom will sweep clean for long?" How do they?

A number of authorities have made visits to schemes which have been illustrated and have become outstanding examples. I would not be surprised if the Dunbar scheme by Basil Spence & Partners has been the prime example in this connection in Scotland.

The chairman I referred to earlier in this article suggested that a competition might be held. This, on the face of things, appeared to be the solution until the council went into the matter. Here are some of the questions they asked. Can we, as a council, be the assessor? On being informed that the answer was no, the next question was: How do we know that the design chosen will be to our liking? (After some of the competition experiences within the last year it is difficult to answer this question.) What will it cost to run a competition? If the architect's office is a considerable distance from the town do we pay his expenses? Do we have to pay each competitor something if we invite them to take part?

If you have followed competitions I have no doubt you will be able to supply the answers to the questions that I have mentioned, but you are an architect; how can you expect a councillor to know the answers? He obviously doesn't and the uncertainty of the whole business frightens the councils from proceeding further.

You may say a good job, too—who wants to be bothered with a competition for a small housing scheme? The answer is to be found in the response to the competition for cottages in West Wycombe in 1944 and the competition for a pair of rural workers' cottages, also in 1944, when 500 schemes were submitted for the latter. You may disagree with competitions on principle. I am well aware of the "fors" and "againsts" of the system, but it must be admitted that a competition (and the smaller ones in particular) provides an opportunity for the younger members of the profession to show their worth.

How does a council who are considering the question of a competition find the answers to the many questions that invariably arise? The answer is simple, write to the R.I.B.A. The R.I.B.A. will, I know, supply the information, but a letter is not the same as a personal visit from some member of the profession. To them they can address their queries. The personal approach or the question-and-answer basis, presuming the person who has to supply the answers knows them, is far better. Who can supply the answers?

Architecture is an art, not a commodity to be sold like a vacuum cleaner. But even art needs a salesman if it is to survive or rather progress. Have we got a salesman? In my view, if a council raise a query on, to use my example, a competition, the profession should be in a position to delegate someone to attend upon the council to answer in person on behalf of the profession. This should be the task of a member of the Allied Society in the area. Do councils even know of the existence of Allied Societies? Have we anyone in the various societies who would be willing to undertake this type of work?

The whole question of public relations is one which should be considered by the profession. Are we not apt to look upon architecture as an art and forget that councils are seeking guidance upon many points which in our own interest we should offer to assist them?

M. E. TAYLOR, A.R.I.B.A.

N.F.P.C. Annual Meeting

The National Federation of Plastering Contractors held its fifth Annual General Meeting yesterday at the Piccadilly Hotel, London. The Council of the Federation have decided to nominate the following to be officers of the Federation for 1955:—

President: Mr. J. S. Cook (Cambridge); Senior Vice-President: Mr. A. R. Ball (Liverpool); Junior Vice-President: Mr. A. C. V. Telling (Bristol); Honorary Treasurer: Mr. H. Humber (London); Immediate Past-President: Mr. R. A. Atkin (Cardiff).

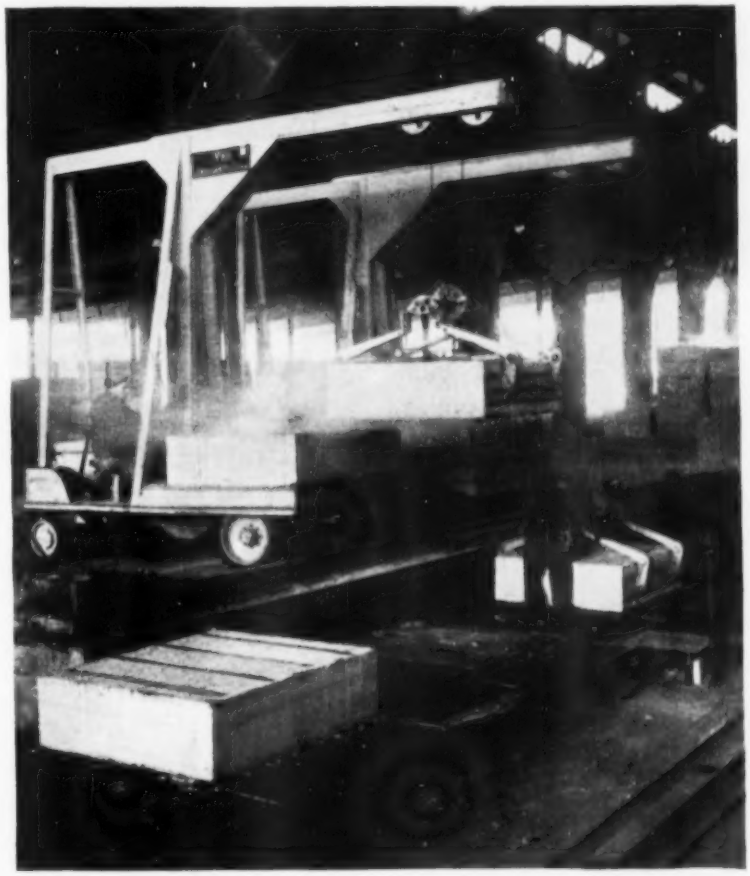
Swedish Lightweight Concrete Building Units

SWEDEN'S building industry has been almost completely revolutionized during the past 30 years by the development and intensive use of lightweight concrete building material of Swedish invention. Between 70-80 per cent of all new Swedish home units are now constructed mainly or partly of lightweight concrete, mostly of the chemically aerated type. The intensive use of this new building material is all the more remarkable in a country with excellent supplies of traditional building materials such as clay brick and timber. This development is due both to the low cost and to its outstanding qualities as a building material.

Lightweight concrete, which is today recognized as one of the really great improvements in building materials and in construction, has developed along different lines in different countries, due to natural resources and to the various national conditions. However, the variety of lightweight concretes can be divided into four main types according to the method used to introduce into the material the air required to give it the necessary aerated quality. These groups are:—

1. Lightweight aggregate concrete, which has so far dominated the development in the U.S.A. and certain other countries, partly due to the favourable supply of lightweight aggregates and partly due to the previous development of highly mechanized concrete block machinery;
2. "No-fines" concrete;
3. Concrete aerated with foam;
4. Chemically aerated concrete.

Materials in this fourth group have lower density and higher strength than the other kinds. It is this type which Sweden has developed, and which is now being adopted by many countries which are planning or building plants on a licence basis.



The Swedish Product

Ytong, the largest of these materials, is at present produced for the Swedish market in the six works in Sweden, which have a combined daily capacity of approximately 70,000 cu ft. Approximately 80-90 per cent of current output is in the form of standard building blocks, which are used for load-bearing external and internal walls, and the remaining quantity is taken up by reinforced material for roofs, floors, insulating slabs, window lintels, etc. The standard blocks are used for construction of buildings of up to five storeys, with the saving of half or in some cases two-thirds of the weight of traditional materials and with very obvious savings in foundations and gains by way of good insulation. Another type of construction is the reinforced monolithic concrete building of some 18 or even more storeys externally insulated with Ytong slabs, which also serve as forms for the casting of the concrete structure. This saving of formwork is especially important for countries which, unlike Sweden, have a timber shortage.

Contrary to practice in many parts of the world, this insulation is put on the outside of the building, giving the advantage of a better heating capacity inside the house. In addition, the surface of lightweight concrete units is better than that of plain cast concrete for plastering, and this has proved to be very advantageous.

Window and door lintels of lightweight reinforced concrete are so simple and satisfactory that they are widely used even in buildings constructed in other materials. Complete safety is a characteristic of the material wherever it is used.

Storey-high wall slabs and reinforced roof and floor slabs are becoming more and more common, not only for industrial works but in the building of homes. While this simple roof structure has for long been ideal for most industrial buildings, all these forms of the material are now becoming increasingly used in the many different types of house building. In this connection it should be noted that in Swedish blocks of flats, which have walls of loadbearing lightweight concrete, and in multi-storey buildings of monolithic concrete, the floors are generally cast in monolithic concrete. Although this is contrary to the general practice in many European countries, where there is extensive use of hollow floor blocks, the success of the Swedish method cannot be questioned.

What can be said to be ideal in Sweden is, however, not always ideal for other countries where other factors, such as regulations, trade unions, raw material supplies, and local demands, tastés and requirements, in addition to those of construction, have also to be taken into account. Despite this there is no real reason why the successful development of lightweight concrete building units which has taken place in Sweden should not be repeated in other countries willing to take up the method, according to the manufacturer.

Economical to Produce

Ytong material is produced from siliceous material and quicklime. Many types of siliceous material can be used such as sand, coal waste, burned coal waste, fly-ash, blast furnace slag and pumice stone. As the lime does not have to be of a high quality, any non-dolomitic limestone can be utilized; this can either be burned separately, as in the standard practice, or together with such siliceous materials which have sufficient heat values to calcine the







Ytong blocks being placed and sawn.

limestone. The latter is the case in Sweden, where bituminous oil-shale is burnt with limestone in field kilns. The calorific economy is extremely good, as only 25 per cent of the fuel used in similar cement products is needed. Although to produce lightweight concrete materials by this method requires relatively high capital investment, it is not higher than that of a modern brickworks and production per man-hour is considerably greater than that of brick manufacture. It takes two man-hours to produce a cubic metre (35 cu. ft.) of Ytong if all factors including quarrying, raw material preparation, manufacture and transport are taken into account, while only 0.6 man-hours per cubic metre are required in the manufacturing process itself.

Production Method

The siliceous material and the lime are conveyed to the crushing section and ground into a "flour," the fineness of which is carefully controlled, and a further homogenization is achieved with mechanical stirring devices and by air agitation. After the grinding process, screw conveyors carry the "flour" to the mixing station, where it is immediately mixed with water and where aluminium powder or another foam agent, together with certain chemicals, are added—by varying the proportions of the raw materials, different densities for the final material can be obtained.

The resulting sludge or slurry is then poured into moulds to set. When it is solid it can be cut into blocks and slabs of desired dimensions. These units are then "cured" in autoclaves by saturated steam at approximately 143 lb/sq in. High-pressure steam curing accelerates the hardening and so, after a relatively short time, the material can be moved and prepared for delivery.

Ytong can be made to various densities to fit it for specific uses. About 60 per cent of the present output of the firm is of a normal density in the dry state of 31 lb/cu ft, which can be used for load-bearing outside walls in up to three-storey buildings and as panel walls in skeleton frame houses where loads do not exceed 43 lb/sq in, according to the Swedish Building Code of 1950. Ytong, with a density of 41 lb/cu ft, is mainly used for load-bearing outside and inside walls where loads do not exceed 86 lb/sq in. Insulation slabs for insulation of monolithic concrete, brick, floors, roofs, etc., are of a density of 25 lb/cu ft. This material has recently been approved for small buildings up to one and a half storeys, where the wall bearing capacity is 22 lb/sq in. Lintels are manufactured for various permitted loads from 400 to 1,200 lb/sq ft. The reinforcement, which differs according to the type and to the kind of loading, is spot-welded, anti-corrosion treated and placed directly in the Ytong sludge for loads up to 600 lb/ft, while for loads exceeding that amount the lintels are manufactured with reinforced concrete cores in the sludge.

Wall Slabs

For internal partitions storey-high "planks" 3in and over, can be produced either reinforced or non-reinforced. These are extremely practicable and are being increasingly used as they give a very smooth dry wall and allow wallpaper to be applied without any base. For external walls storey-high "elements," which need not be reinforced, can be supplied in thicknesses of 6 to 10in, according to climatic demands. They are grooved, allowing a cement core to be poured between, and as they are speedy to erect they effect great saving. Ytong wall slabs have a density of 31 lb/cu ft.

Roof and Floor Slabs

The normal Ytong density for reinforced roof slabs is 31 lb/cu ft but this can easily be increased if special conditions require stronger roofs. The application of reinforced Ytong roof slabs is very simple—slabs are connected together by steel reinforcing rods placed in the milled grooves along the top edges. The grooves are afterwards filled with a cement mortar before the roof is covered with asphalt paper.

Where there is a high humidity in the atmosphere certain problems will arise if the anti-corrosion treatment should prove to be insufficient. "Ventilated" roofs should be constructed to meet these exacting conditions.

It is indeed interesting to note the results of an investigation made in Sweden in the autumn of 1949 by the State Board of Building Standards. Of the Ytong roofs in different parts of the country which had been erected between 1930 and 1940 examination showed that none had received damage which was detrimental to the building. Over 40 per cent had no damage whatsoever and in the rest of the cases where slight damage was noticed it was due to damaged coverings or other indirect outside causes. To-day a new and superior special method is applied which under normal conditions guarantees a 100 per cent safety against corrosion.

Floor slabs are manufactured in much the same way as are roof slabs, being designed in each case for the particular loads required and for their own weight together with the reinforcement. Also the Ytong floor can be used with a wide variety of floor coverings. Reinforced floor slabs are manufactured mainly to a density of 44 lb/cu ft which provides a very effective sound insulation. Unreinforced floor slabs can be used in certain conditions, in which case they are made to 41 lb/cu ft and to dimensions of $40 \times 20 \times 4$in. The thickness varies in accordance with load-bearing requirements. Unreinforced floor slabs are placed between steel girders and the closing up of the joints and edges is done with cement mortar, after which the floor is laid.

International Progress

Many countries have taken up the new building material and their works have a total production which is now almost double that of Sweden.

THE GROWTH OF LONDON

1. Policy and Population

By F. H. B. LAYFIELD

Introduction

FOR some centuries concern has been expressed about the ever-widening spread of London. Concern in recent years has sometimes become anxiety and much serious thought has been devoted to the problems so raised. This process crystallized in the plans which were prepared for the London region in 1943 and 1944. These plans set out in broad terms a clear policy for the future of Greater London. They were designed to govern its future development and they advocated a halt to its growth and provided a guide for its gradual reorganization. These plans were made at a moment of unparalleled advantage. Wartime evacuation had considerably diminished the numbers of people living in London; further large numbers of men and women were away on service. At the same time the blitz had destroyed and damaged vast numbers of buildings of all kinds; in some places hundreds of acres were laid waste. Here, then, was what a Minister of the Crown called "a unique opportunity" for effecting any redistribution of London's population that might be desirable in the national interest.

Ten years have now passed and it seems a fitting moment to consider what has happened in that time. It is the purpose of this article and those that follow to review, briefly, what has occurred in the intervening years and to consider what the position is to-day, observing opportunities and obstacles alike.

The Origins of Government's Policy

Before considering what the London plans proposed and how far they have governed subsequent action it is useful to look very quickly at the roots of current policy since they affect very closely the shape of action to-day. Moreover, the London plans themselves and their successors are firmly rooted in earlier declarations, without which they cannot be fully understood.

The disasters of the great depression in the 'thirties drew attention to the unsatisfactory way in which industry and employment were distributed in the Kingdom. This, in turn, caused notice to be taken of the dangers attendant on "the continuous and haphazard growth of a vast industrial and commercial centre such as the Metropolis." Sir Malcolm Stewart, then Commissioner for the Special Areas, described this process in strong terms and urged "that an embargo should, subject to certain exemptions, be placed on further factory constructions in the Greater London area." He made clear that in his view "this would not increase the volume of production, but it would secure a better national distribution of industrial activity, and the special areas would benefit by obtaining a share of the diverted development."

It was this anxiety over the welfare of the Special Areas which set the machinery of investigation in motion, and in some roundabout but important ways it has strongly influenced the management of affairs ever since. After protracted discussion of the Commissioner's proposals, a Royal Commission was the outcome. Mr. Ernest Brown, the Minister of Labour at the time, announcing its appointment said:

> "The Commissioner has called attention to the fact of the excessive growth of London, and has expressed the opinion that further extension of industry in Greater London should be controlled, as a means of securing more even distribution of production, in which, he hopes, the Special areas will share. This extension . . . gives rise to grave problems, not merely of industry, but of health, communications, vulnerability from the air, and other problems which go far beyond the issue raised by Sir Malcolm Stewart. The Government feel that these wider issues deserve authoritative and comprehensive study, and they propose to appoint a Royal Commission for this purpose."

The Barlow Commission, subsequently appointed, certainly satisfied the Government's desire for a thoroughgoing study. They sat for more than a year and heard a mass of evidence. This evidence, given by many private individuals, firms and organizations, as well as Government Departments, was published by H.M.S.O. in twenty-six parts. The Report was published in 1940 and was an important document.

The Barlow Commission came to several emphatic and unanimous conclusions. On some other matters, mainly those of how to implement their conclusions, there were dissensions. But they were all quite convinced that the great industrial concentrations suffered from serious strategic, social and economic handicaps which constituted a danger, in some respects, to the nation's life. These dangers and problems, they said:

> "present themselves with special insistence in the case of London and the Home Counties. It is not only that the mere size, spread and growth of this great conurbation tend to accentuate the various disadvantages present in greater or lesser degree in other conurbations, but also the trend of migration to London and the Home Counties is on so large a scale and of so serious a character that it can hardly fail to increase in the future the disadvantages already shown to exist. . . . In the view of many who have given evidence before the Commission—a view with which we find ourselves in complete accord—the circumstances are such as to demand that steps be taken without delay with the object of checking its further growth." (para. 426.)

Apart, moreover, from calling for a halt to the further growth of great urban areas, particularly London, they also urged that industries and industrial population should be decentralized or dispersed from such areas.

The Government's Policy Defined

Despite the clarity of the Barlow Commission's findings on many matters the Government's attitude was uncertain for a long time. Repeated questions in the House of Commons on the subject throughout the war years failed to elicit any clear answer. Meanwhile two important steps had been taken. At the instance of Lord Reith, the London County Council commissioned their architect, Mr. J. Forshaw, and Sir Patrick Abercrombie to prepare a plan for the County of London. This was published in 1943. As a companion to this another plan was prepared by Sir Patrick at the request of the Minister of Town and Country Planning, Mr. W. S. Morrison. These two plans together set out certain important principles, closely related to the Barlow Commission's conclusions, by which it was proposed that the whole future of London should be guided.

Early in 1946 the Minister of Town and Country Planning at last made a clear and comprehensive statement in which the Government's attitude to the Barlow Report, the plans for London and London's future, were set out. This statement is worth quoting in full. Not only does it still stand as a major statement of official policy, but it pro-

vides the touchstone by which subsequent results are to be judged. The Minister said:

"The policy of His Majesty's Government on this matter is in accord with the fourth and fifth conclusions of the Barlow Commission."

The substance of these two conclusions has been described above. The first relates to the need for decentralization and dispersal of industries and population while the other sets out the need for immediate action to halt the growth of London. The Minister continued:

"The Plan for the County of London and the companion Plan for Greater London, which covers the areas surrounding the county, between them contain a number of co-ordinated proposals aimed at achieving these objects. The Plan for Greater London has been under close examination by a number of my colleagues and myself and the following decisions have been reached."

This statement makes plain that there is here a carefully considered declaration of Government policy. The Minister proceeds first to expound what are to be the several aims of future policy and future action in London.

"First, the *overall growth* of London's population is to be *restrained*. This is one aspect of the general policy of achieving throughout the country a better balance of the distribution of industry and in particular in assisting the industrial recovery of the Development Areas. [Broadly, the old "Special Areas."]

"Secondly, *a planned programme of decentralization* to the outer areas of Greater London should replace the uncontrolled sprawl of the inter-war period. War damage in the congested inner areas and wartime evacuation provide a unique opportunity for affecting this redistribution. The intention is to make provision for about a million persons and concurrently a related quota of industrial firms to be accommodated further out—mainly in a few new towns and in selected existing towns within 20 to 50 miles of London's centre. . . .

"Thirdly, it is proposed that the general lines of the decentralization and resettlement should broadly conform to the proposals made by Sir Patrick Abercrombie for dividing the area into *four Rings*. From the County of London and the *Inner Urban Ring* round it, which forms the congested areas, most of the decentralization should take place. The next Ring, the *Suburban Ring*, should be regarded generally as static. Surrounding the built-up area a *Green Belt Ring* is to be carefully safeguarded, and this Ring, except in permitted cases, should act as a barrier to suburban growth. The fourth or *Outer Country Ring* should serve as the main reception area for persons and industry moving out from overcrowded London into compact settlements surrounded by open country."

Housing Construction: (Greater London Area)*

From the end of the war to June 30, 1954

	County of London	Remainder of London area	New Towns†	Total
Housing Authorities and Associations.....	92,529	128,247	13,465	234,241
Private Builders	2,625	49,269	—	51,894
War Damage Repairs	7,051	16,373	—	23,424
Temporary Houses	15,225	19,430	—	34,655
	117,430	213,319	13,465	344,214

*Compiled from MHLG Housing Returns for England and Wales, Appendix B.

†Excluding Bracknell and Crawley which are outside the Greater London Area and account for another 4,000.

Various minor adjustments to this policy have been announced from time to time. Others have been less openly made. But broadly this statement still remains the Government's manifesto in the matter.

Challenge and Response

In 1951 the Ministry of Local Government and Planning characterized these aims by saying that

"This is the challenge to planning; to halt the further physical growth of the Metropolis and, at the same time, to reshape its vast urban mass so as to remedy the obvious defects of overgrowth. . . . To give effect to these principles clearly required bold and far reaching proposals. Nevertheless the challenge has been accepted. All three of the plans for the London area . . . are founded upon the Barlow principles and *they do not shrink from the implications*."

To give effect to these "bold and far reaching proposals" a not inconsiderable apparatus has been assembled both in Whitehall and elsewhere. The Ministry of Housing and Local Government has an entire Division devoted to London and the Home Counties supervised by an Under Secretary, and a London Technical Branch as well. The London County Council has a large staff to deal with these matters and a great many Metropolitan Boroughs also have staffs concerned with the same problems, as do the adjoining counties. A great deal of time and money have been expended upon the preparation of Development Plans by the L.C.C. and the surrounding counties. Development corporations have been appointed for Basildon, Bracknell, Crawley, Harlow, Hatfield, Hemel Hempstead, Stevenage and Welwyn Garden City and each of them has a staff.

Nor is the effort and expenditure confined to matters of personnel for under the guidance of these authorities and their advisers, acting in the light of the clear guiding principles examined above, a great deal of construction has been taking place. Some idea of its magnitude may be seen by noting the details of houses constructed up to June, 1954, in the London area since the war.

Up to April, 1954, a sum of £60 million had already been advanced by the Treasury to London New Towns and undoubtedly huge sums had been spent on a multiplicity of other projects.

The Ministry says that the challenge has been accepted so to direct all uses of land and construction of buildings that they take place in accordance with the principles already mentioned. Before accepting that bold official assertion it is reasonable to see what has happened to date and to compare it to what was proposed.

The Metropolitan Centre

It will be recalled that "from the County of London and the Inner Urban Ring round it," said the Minister, "most of the decentralization should take place." It was envisaged that about a million people who once lived and worked there should be found homes and employment elsewhere. The exact numbers who should live in the area was, it appears, hard to decide. The authors of the Greater London Plan thought that the pre-war total of 5,690,000 persons should be reduced to about 4,459,000. The Minister when he reviewed this estimate in 1947 thought the maximum population in the Central Area ought not to exceed some 4,542,000.

Such a change in the number of people living in an area must of necessity be a drastic decision, and to achieve such a result represents a considerable

The shades of night were falling fast





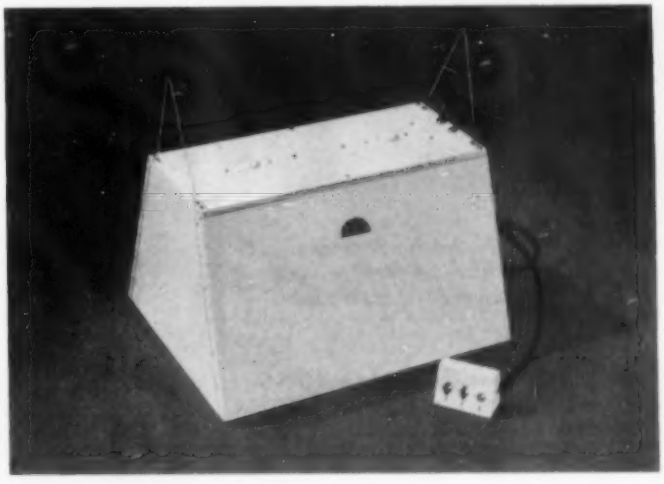
Yet it was but three in the afternoon of an English Summer day. Peering distractedly at the specimens before him, the Colour Matcher felt the onset of a Black Despair and uttered an Awful Oath. His distress was great, for he was engaged upon a Rush Job for a Very Important Customer.



At that very moment appeared the Works Manager, a kind and sagacious man, who bore before him a very Strange Device.

'Your perplexities are ended,' said he 'for this wondrous affair will make light of your problems. This, my care-worn friend, is the Siemens Industrial Colour Matching Unit. Marvellous to relate, it produces a high-intensity light identical to daylight itself, at a colour temperature of 6500°—7000°K. And, unlike the light against which you now wage a losing battle, *it never varies.*'

The Colour Matcher, unbelieving, plugged in the Strange Device. He turned the switch . . . and there before his eyes was the precise match he had so long and vainly sought. '*Excelsior*', *cried the Colour Matcher.*



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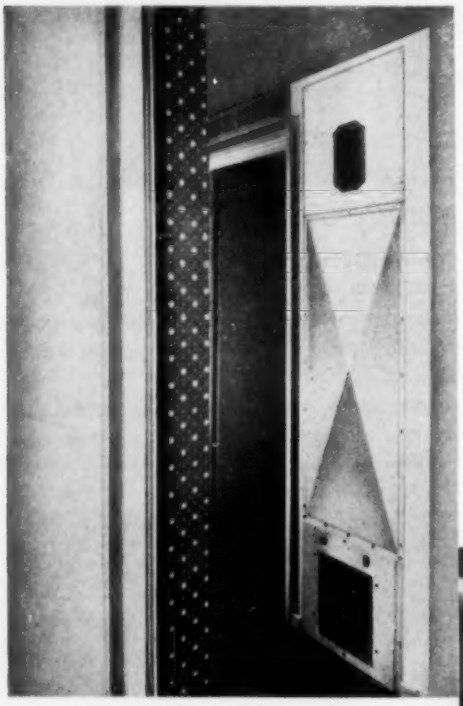
Cavendish Court, 11/14 Cardigan Road, Richmond. Architect: Mr. Eric Lyons, F.R.I.B.A., M.S.I.A.

New Richmond flats use Radiation SMOKELESS WHOLE-HOUSE WARMING

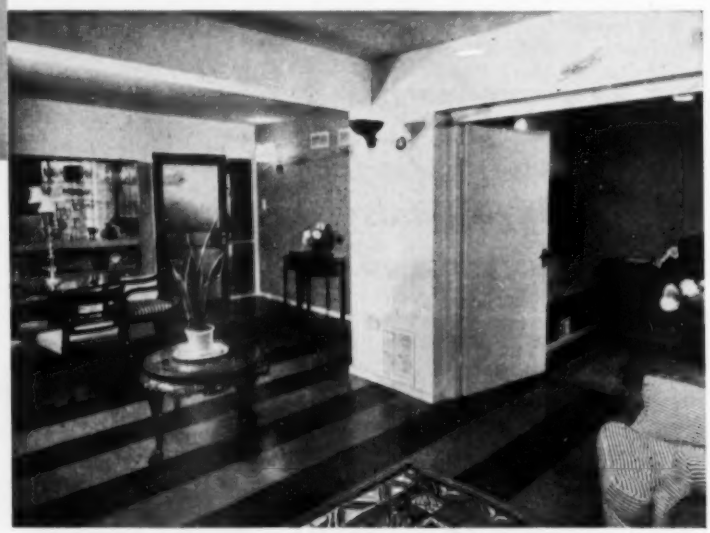
These new flats in Cardigan Road, Richmond, Surrey, show how the architect has greater flexibility in planning when he specifies Radiation's economical and trouble-free system of Whole-house Warming.

The fully automatic gas-operated heating unit fits unobtrusively into a small insulated recess. Ducted warm air is circulated throughout the flat and thermostatic control enables room temperatures to be regulated accurately to the needs of the day and hour. In summer the system may be used to cool the flat. The system operates at 3 to 4 times the efficiency of a normal open fire.

The same remarkable fuel economy is obtained from Radiation's oil-fired and solid fuel-burning units which operate at an efficiency of about 75%. The solid fuel unit incorporates a smoke-consuming down-draught furnace and a 40 gallon hot water cylinder. The oil-fired unit can be supplied with or without a hot water cylinder.



The insulated heating unit occupies very modest floor space in a small recess in the passage



Warm air inlet register and high level return air grille, unobtrusive yet effective. The room thermostat controls temperature

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practical problem. The Minister, however, it may be thought rightly, considered that wartime evacuation and air-raid destruction offered a "unique opportunity" to bring about so large a change in affairs, for by 1943 the population had fallen to 3,722,000. The chance to so direct the reconstruction programme that these ends were served must have afforded an opportunity that can fairly be called "unique," since it is unlikely it will be presented again in a lifetime in so favourable a form. If there be a next time matters are likely to be arranged rather differently. It can be seen from the table set out above that houses have been built since the war in Greater London to accommodate well over a million people.

In the post-war years the population in the central area has risen by some 26 per cent and by 1953 stood at 4,841,105, as against the target of 4,542,000. Yet more important than the fact that the current population figures are well above those intended is the prospect for the future. In the central area there are large areas of land which are still derelict from war damage. These sites are, in a great many cases, commercial and industrial sites. All the present indications are that, when rebuilt, they will once more be used for similar purposes. It may reasonably be expected that when these sites are once more built over the numbers of people employed in the central area will show a substantial rise. Accordingly, it may be thought that this, in turn, is likely to cause a further rise in the population of the central and adjoining areas, since it is employment which mainly governs the numbers of people living in or near any area. In the unlikely event of this expectation not being fulfilled, a notable addition will be made in the number of people who journey from afar to work in central London.

There are, further, many areas of land now derelict which must soon be covered once more by dwellings, especially flats, and particularly in the East End. Such construction will add further to the population. Finally, there are the likely effects of clearance schemes which the London County Council now have in hand, such as that at Bethnal Green, or which they are contemplating. What kind of buildings they will erect on such land must be conjectural at this stage, but the post-war record of the L.C.C. very strongly suggests that the number of persons per acre is likely to be high; indeed, it is likely to be in excess of that advocated in the plans or by the committees who reviewed those plans.

It may fairly be thought that the present indications predicate for the central area a steady increase in numbers of people living there, in addition to the fact that the population already resident there is well in excess of the maximum laid down by the Minister.

The Suburbs

Enveloping the metropolitan centre there lies a broad swathe of suburbs which in 1938 housed some 2,413,000 people. This Ring, the Minister stated, "should be regarded generally as static." In saying this he was following the proposals of Sir Patrick Abercrombie and of the committees which considered his plan. During the war the pre-war population total fell to 2,267,000 by 1943. This had risen again by 1945 to about 2,278,000. The total population in 1953 was 2,611,060, nearly 200,000 above that before the war.

The Green Belt

One of the cardinal features of the London plans was the establishment of a broad area in which, in general, no building was to be permitted except such as was needed for agricultural purposes. In the inter-war years the countryside and all its pleasures were becoming ever more remote from those who lived in central London. Such people had already to travel considerable distances to reach the open air and green fields. It was therefore one of the most popular ideas set forward in the London plans to call a halt to the continued sprawl of bricks and mortar. The Minister himself said that these parts were to be "carefully safeguarded" and he pointed out in his statement, it will be remembered, that this belt was to "act as a barrier to suburban growth."

The Minister has continued to give at least verbal support to this conception. In one such statement he said:

> "He placed the greatest possible weight on the importance of maintaining the Green Belt and would not countenance any general weakening of that policy."

In this important area the current story of London is perhaps at its most striking. In 1938 the population of the Green Belt was some 1,194,000. By 1953 this had grown to 1,657,000; an increase of about 463,000. Even since 1945 there has been an increase of some 29 per cent in the population there. It should in all fairness be added that Sir Patrick Abercrombie, the committees who studied his plan and the Minister all agreed that the immediate post-war housing need made *some* building in these districts a regrettable necessity. None of them envisaged an increase of this order.

Furthermore, this increase in population has not yet reached its zenith. In 1953 there were, and there still are, several large L.C.C. out-county estates such as those at Slough and Aveley in course of construction. These and other current development will add substantially to the numbers already living in the Green Belt. Finally, when reference is made in a later article to the development plans affecting the Green Belt, it will be noticed that yet further increases may be in contemplation.

The Growth of the Reception Area

In that encircling girdle of country called by the makers of the Greater London Plan the Outer Country Ring, there was to be a major increase in population. In these parts it was intended that there should be found the future homes for the majority of those million or so Londoners who were to be moved from the congested inner areas. This Ring was, as the Minister put it, "to serve as the main reception area for persons and industry moving out from overcrowded London into compact settlements surrounded by open country." It would occasion no surprise, therefore, if it were now found that the population in these districts of Greater London had increased vastly since the war. The pre-war population of these districts was around 853,000, which by 1943 had risen to 935,000. By 1953 the total population had reached 1,095,000. This should be compared with the total population which has been proposed. The Greater London plan proposed that this Outer Ring should contain some 1,500,000 people, but the Minister, when he reviewed the plan, thought 1,407,000 a more reasonable target.

Comment on the prevailing position in these parts would be incomplete without reference to the development of New Towns. It was an integral part of the Greater London Plan that some of the population moved out of central London should be accommodated in New Towns. At a later stage it was suggested that this necessary rehousing could be effected by adding to existing towns and settlements in the Region and that New Towns would be useful merely as an exercise in the technique of creating and designing towns. The Minister, in his Memorandum of 1947, emphatically rejected this proposition and the document stated that "The Minister regards the provision of New Towns as an essential part of the regrouping of the population." In pursuance of his opinion the Minister has established eight New Towns around London. Six of these towns are in the Greater London area and two,

Crawley and Bracknell, lie just outside it.

The sites for these New Towns, created under the New Towns Act, 1946, were formally designated between November, 1946, and June, 1949. Ultimately they are intended to contain upwards of 380,000 people in all. By April, 1954, the total population of these towns was a little over 150,000, but some 101,000 people lived there before they were designated. Accordingly only some 49,000 people have been added as a result of the development corporations' activities thus far. Under the present dispensation, while it is certainly true that some of the additional population came from London, there is nothing to indicate that the others do, nor is there any apparent reason to assume that the bulk of their ultimate inhabitants will necessarily come from London.

The Present Position Summarized

To summarize, then, the response to the challenge described by the Ministry, it is this. In the important congested areas in the centre of the Metropolis there has been a considerable increase in population since the end of the war. This increase has not yet brought the total population back to its pre-war size, but it is already beginning to approach it. The size of the population there is already well ahead of the target set by either the Greater London Plan or by the Minister. In view of the present kind and quantity of building activity in central London, and of the amount of land still derelict, the present indications may be thought to herald a considerable increase of population in the near future.

The Suburban Ring, which was to remain static, has grown appreciably but it may be felt, not dangerously. It is now housing some two hundred thousand more people than before the war. The Green Belt, where there was to be a virtual standstill with some important exceptions, has grown startlingly, and its post-war population is nearly five hundred thousand greater than it was before the war. Where it was intended that the growth should be smallest it has been largest. Just the opposite is true of the outer Country Ring. Here, where there was to be a major increase, there has been only a small increase. With the exception of the Suburban Ring the percentage growth in this area has been the lowest of all since the war.

The net result of growth in the various areas has been that London, which was to have had a halt called to its growth and was then to be reduced in size by decentralization and dispersal, is now, nine years after the war has ended, slightly larger than before. The whole position may be briefly set out in the form of a table as follows:

	Population: in 1938	per G.L.P.	per Minister's Memo. of 1947	in 1953
L.C.C. and Inner Urban Ring	5,691,400	4,458,650	4,542,600	4,841,100
Suburban Ring	2,413,400	3,413,400	2,413,400	2,611,000
Green Belt	1,194,000	1,382,550	1,493,200	1,656,600
Outer Country Ring	824,200	1,499,900	1,406,800	1,095,500
Total Greater London	10,123,000	10,754,500	9,856,000	10,204,200

It has for some years been the official policy to effect in Greater London an important redistribution in population and industry. The years in which a "unique opportunity" offered itself by which to achieve that declared aim are largely past. The result so far has been a slight increase in the population of the Region and the main change in distribution so far achieved appears to have been in the Green Belt, where it may be thought it was least to be desired. That more progress has not been achieved may be due to various difficulties which the next article will discuss. Whatever the difficulties and obstacles, there is at present a wide gap between declared official policy and the practical management of affairs. It may be that the policy is wrong and should be changed. On the other hand, it may be that the policy is right and some serious effort should be made to ensure that practice and policy bear some recognizable similarity. Meanwhile the lay spectator may perhaps be pardoned if he is led to the conclusion that the cost in time and money of controlling the use of land in Greater London is hardly commensurate with those results that the public can see at present.

London Builders Foremans Association

The November meeting of the London Builders Foremans Association was held at the Memorial Hall, Farringdon Road, under the chairmanship of the President, Mr. F. A. Dryland. Mr. D. E. Woodbine Parish, former President of the L.M.B.A., addressed members on the subject of "Building Contract." He briefly explained the principles of Contract Law with particular reference to the responsibilities of a General Foreman under the standard form of R.I.B.A. Building Contract.

Mr. Parish said he felt there was a measure of laxity and indifference within the industry with regard to discharging in detail all the conditions and obligations contained in the standard form of contract, and that it was often only as a result of hard experience that the full impact and intent of the conditions of contract became apparent.

He urged General Foremen to realize the immense importance of maintaining a day-to-day diary in which all matters affecting the contractor's obligations and responsibilities to the building owner were recorded in addition to taking the requisite action to comply with the conditions of contract. Such matters included recording and confirming the receipt of verbal instructions issued by the Architect or the Clerk of Works on site, recording details of weather conditions particularly during wet or frosty periods which adversely affect the progress of work, the interference of the work programme resulting from the necessary instructions not having been issued in due time, and the delays on the part of nominated sub-contractors or nominated suppliers which occurred despite every effort having been made to ensure proper performance or delivery within the terms of a sub-contract or order.

Mr. Parish directed particular attention to the liabilities which existed under the standard form of contract for giving notice to local and public authorities to comply with statutory regulations and byelaws, setting out the work, making good defects, and the scope of insurance indemnities.

The talk was followed by a long and interesting discussion during which problems affecting latent defects, sub-letting work, issuing priced Bills of Quantities to Foremen, nominated sub-contractors, and arbitration procedure were referred to.

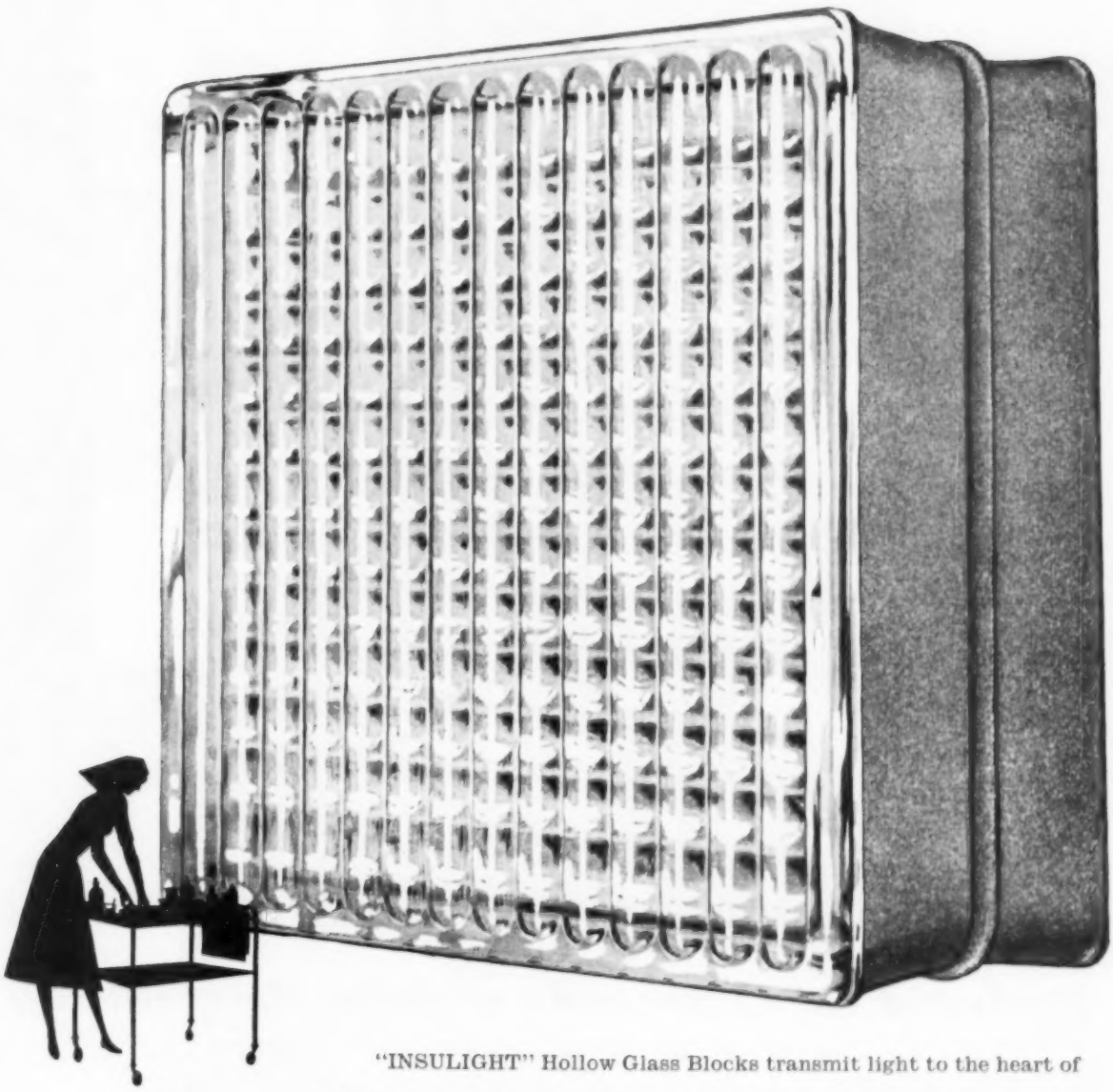
* * *

R.I.B.A. Examinations

The Examination in Professional Practice and Practical Experience was held in London and Edinburgh on November 15-16, 1954.

Of the 256 candidates examined, 231 passed and 25 were relegated.

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"INSULIGHT" Hollow Glass Blocks transmit light to the heart of a building, diffusing it over wide areas in places where ordinary glazing would be undesirable. They cut the roar of midday traffic to a gentle murmur. They hold warmth in and cold out. They keep private places private. In fact "INSULIGHT" Hollow Glass Blocks make walls—but they are walls of light.

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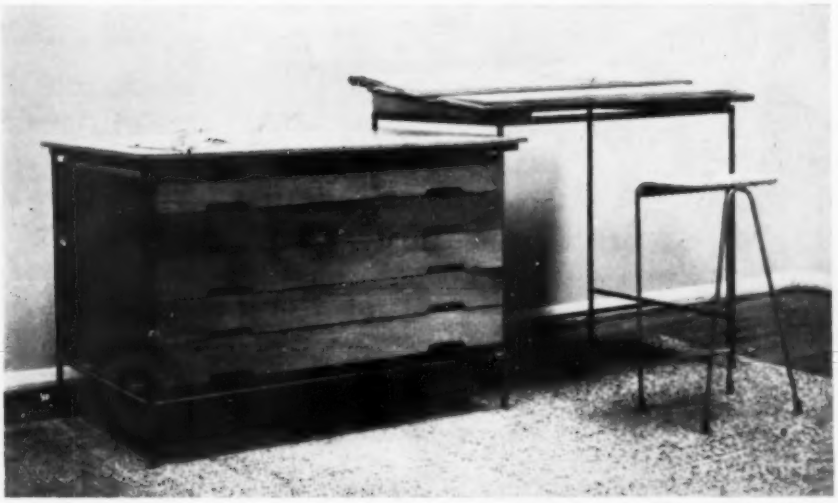
A catalogue and price list of the complete range of Ediswan electrical accessories is available on request.

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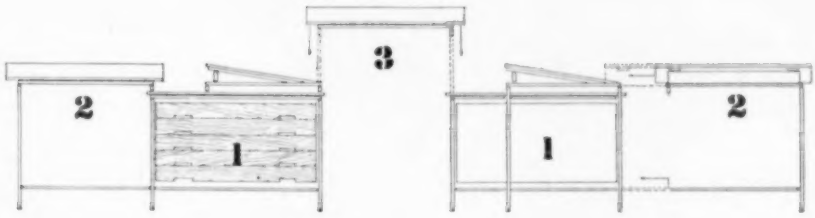
155 Charing Cross Road, London, W.C.2, and branches. *Member of the A.E.I. Group of Companies*

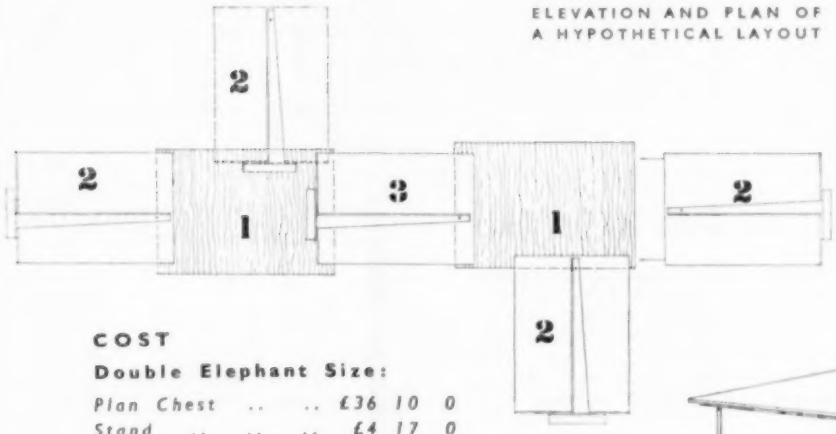
New Drawing Office Furniture

designed by:
MARTYN COLLINS, M.A., Cantab., A.R.I.B.A., & JAMES SPENCE, D.A. Edin., A.R.I.B.A.



Double Elephant Plan Chest and Draughting Stand





ELEVATION AND PLAN OF A HYPOTHETICAL LAYOUT

MAGPIE Drawing Office Furniture is the result of a fresh approach by designers who, dissatisfied with the stock products available, designed their own, drawing on modern aesthetic and functional developments in furniture design. The aim was to produce something capable of flexible arrangement, lighter and brighter than had hitherto been offered.

Unit 1, the basic unit, is the Plan Chest, slotted to receive the steel dowels of the Drafting Stand in any of four alternative positions. Unit 2, the Drafting Stand, is two-legged and has two dowels at the opposite end which slot on to the Chest. A combination of Units 1 and 2 provides Drawing Board support, Reference Table and five Plan Storage Drawers. Unit 3, the Bridge has a dowel at each corner and is used to span between two Chest Units.

As can be seen from the diagram of a hypothetical layout, a high degree of flexibility is attained effecting the maximum use of floor space in any size or shape of room. All three Units are made in D.E. or Antiquarian sizes and both types of Stand may be used with either size of Plan Chest. Brass Screw Feet are tapped to the legs of the Units so that they may be "jacked" up to a level position on sloping or uneven floors.

The welded framework is of ½in dia heavy steel tube enamelled grey. The table top is of 15 mm. plywood with an applied clear polish. The five oak-fronted wooden drawers slide in oak runners screwed to the steel frame. The stove enamelled side and back panels are red and white respectively to contrast with the brass fixing screws and feet.

Alternative colour schemes to suit customers' requirements are available at slight extra cost. Magpie Furniture can be obtained from No. 8, Onslow Road, Richmond, Surrey. Telephone: Richmond 6341.

COST

Double Elephant Size:

Plan Chest	£36 10 0
Stand	£4 17 0
Bridge	£3 8 0

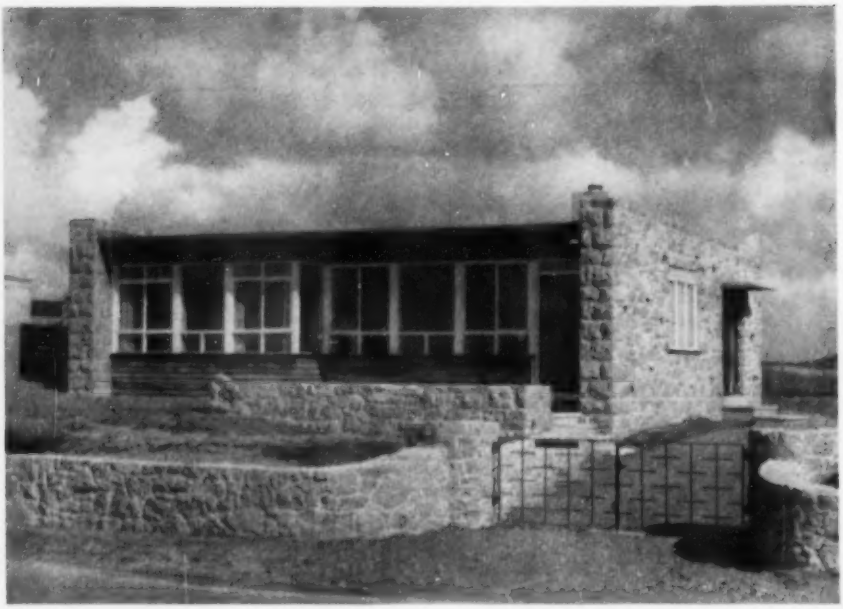
Antiquarian Size:

Plan Chest	£42 0 0
Stand	£5 7 6
Bridge	£3 16 6

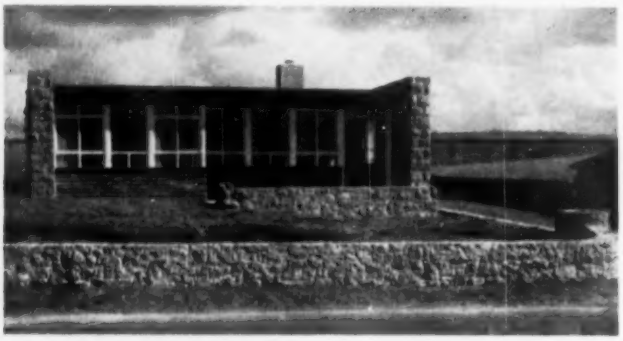


"TAN-Y-GAWRES"

A Week-end House at Cable Bay, Anglesey



Two views from the South and West



architect:

B. HALLWOOD LINGARD,

A.R.I.B.A., Dip.Arch.

THE clients, Mr. and Mrs. Wadsworth, required a week-end and holiday house having a large living area, small working kitchen, two bedrooms and bathroom. The site is on the coastal road on the south coast of Anglesey, about two miles from Rhosneigr. The house is on the north side of the road with uninterrupted views over the beach, coastline and sea. High water mark at this point is about fifty yards from the roadside. Site dimensions are 60ft wide and 120ft long. The site is very exposed to the prevailing South-West winds and the landscape is treeless and mostly sand dunes.

Construction

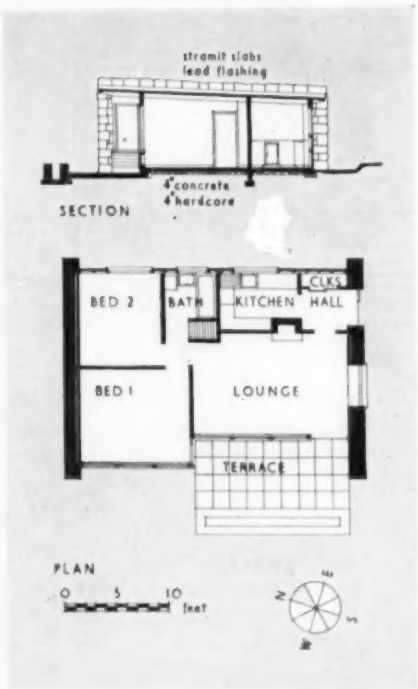
The roof is of monospar construction with a fall of 9in across the width. It is constructed of 2in Stramit slabs on 7in × 2in joists, covered with three layer Permanite roofing with a mineral surface finish.

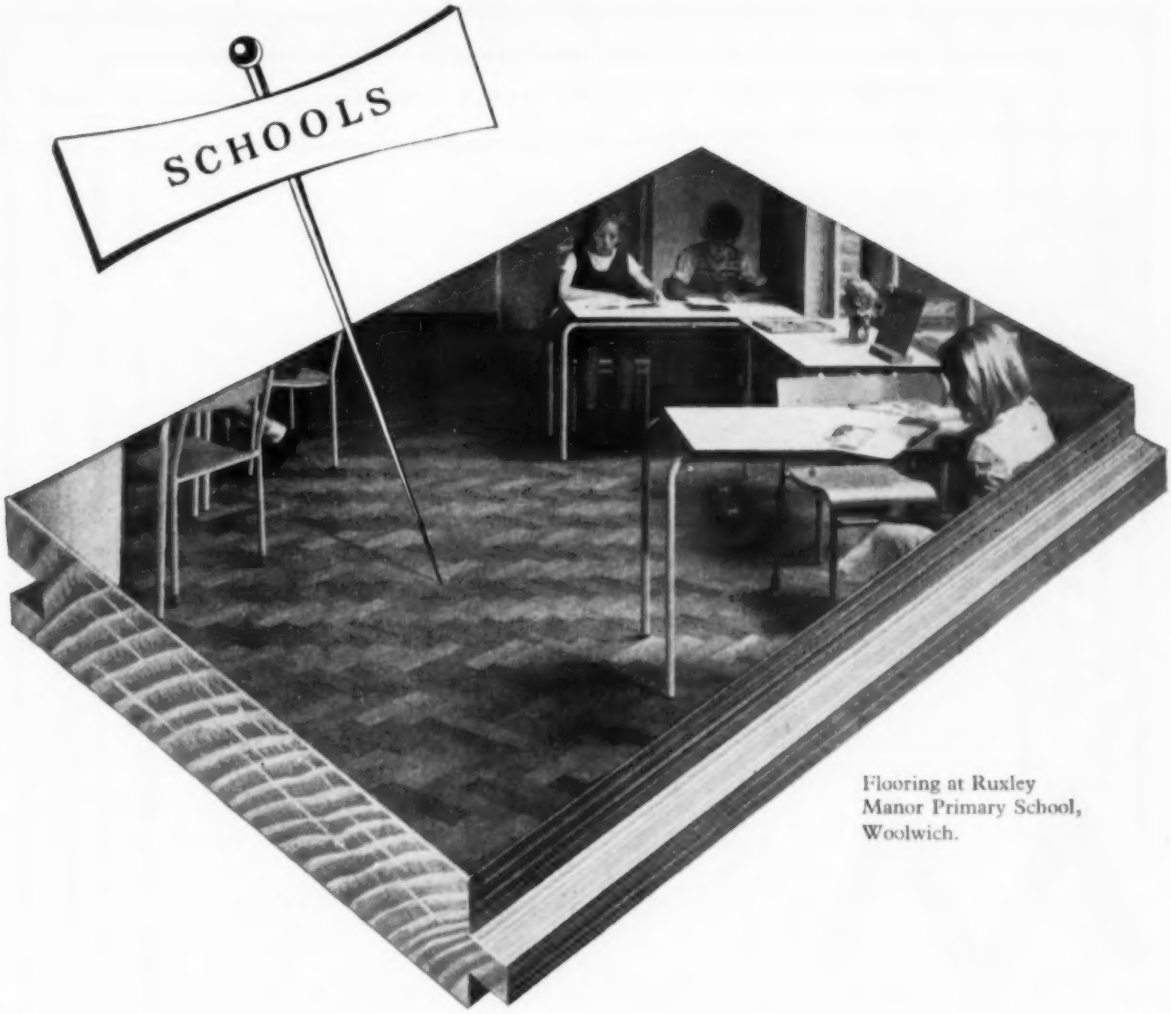
The main walls are built in local limestone rubble 1ft 9in thick with a 3in cavity and a 4½in brick inner skin. The chimney and internal walls are in 4½in brickwork. Windows are standard metal in softwood surrounds set in front and back walls of timber stud construction. These walls are faced with felt under creosoted elm weatherboarding externally and aluminium foil lined plasterboard internally. The floor is solid with thermo-plastic tile covering in all rooms. The living room fireplace is of rubble stonework around an Ideal Neo-fire with fixed back boiler. The terrace is of precast concrete paving slabs bounded by walls and flower boxes in limestone rubble.

Services

Mains water and electricity were not available. Rainwater storage tanks have been installed as a temporary measure and Calor gas lighting and cooking points have been provided pending the connection of mains electricity. Drainage is to a septic tank.

The contract price was £1,750, the contractors were Messrs. Henry Jones and Son, Rhosneigr. The house was started in January, 1954 and completed in April the same year.





Flooring at Ruxley Manor Primary School, Woolwich.

They chose WOOD floors

- ★ A good hardwood floor stands up to a lifetime of hard wear.
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- ★ It is a pleasure to look at.
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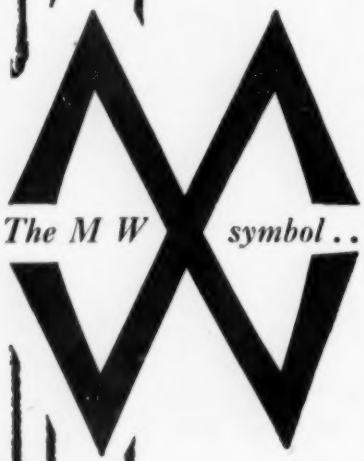
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Information Digest

PROFESSIONAL AND TRADE ASSOCIATION PUBLICATIONS

● **Concrete Evidence.** By the Ballast, Sand & Allied Trades Association, 48 Park Street, W.1.

This small booklet, subtitled "One hundred facts about the sand and gravel industry," is made up of that number of separate paragraphs under twelve headings which include History, Uses, Economies, After-treatment, After-use and research.

This industry, upon which the building trade relies more than any other, comes into a great deal of criticism, particularly on a charge of spoiling the countryside. At the present rate of production less than 2,000 acres a year is being used, much of which is not farm land. Pits can be just to further use when exhausted, when filled they can become once more good agricultural land, or be built over.

The final reports of a Government Committee set up to investigate the problems of the sand and gravel industry, and the difficulty the industry poses, are expected to be published shortly. The committee, which has been since 1946, has already published several reports; it remains to be seen whether central and local government authorities are prepared to implement them.

● **The Glazed Cement Manufacturers Association.**

In view of the increasingly wide use of glazed cement an Association has recently been formed of manufacturers of glazed cement finishes with the object of maintaining a high standard of quality and ensuring satisfactory service as specialist sub-contractors. The members of council are Messrs. C. J. Tatham, L. C. S. Sutton, J. H. Bentham, S. Champion, F. E. Stanley. Secretary's, Treasurer's and Registered Offices are at Russel Tillett & Co., Chartered Accountants, 18, St. Swithins Lane, London, E.C.4. Telephone: Mansion House 6043/7, 5111/2.

● **Welding Research for Industry,** from The British Welding Research Association, 29 Park Crescent, W.1. Telephone: Langham 7485/9.

A very well produced booklet describing the activities of the Association. It is a co-operative research centre for British companies and organizations interested in welding. There are over three hundred registered members; the total number directly benefiting from the Association's work is more than a thousand if group membership is taken into account.

● **Bibliography on Prestressed Concrete,** from the American Concrete Institute, 18263 W. McNichols Road, Detroit 19, Michigan, U.S.A.

The American Concrete Institute announces publication of Bibliography on Prestressed Concrete. This 86-page book lists 2,000 American and foreign literature references on the subject of prestressed concrete, published from 1896 to 1953. A separate section lists some 60 United States, British, German and French patents. The $8\frac{1}{2} \times 11$in format is also punched for easy filing in three-ring binders. Price $2.00. The book was prepared as a part of the work of ACI-ASCE Committee 323, Prestressed Reinforced Concrete.

● **Material Handling Conference,** for the Institution of Productive Engineers, 36 Portman Square W.1.

A transcript of the papers delivered at a Conference held on October 23 at the works of John Wright & Co., Ltd. The papers are, Bringing the Materials to the Works, by J. H. Vine; Bringing Materials to the Works Station, by L. J. Hoefkens; Handling at the Works Station, by J. B. Jay, and Removal of the Job, Swarf and Scrap, by W. M. Hiorns.

TRADE PUBLICATIONS

● **"There's a Job to be Done."** A Film by Allied Ironfounders Ltd., 28, Brook Street, London, W.1. Tel.: Grosvenor 8941.

The film is centred round a discussion group of speakers who give a spontaneous and unprepared talk on certain points relating to the Housing Repairs and Rents Act, 1954. The Chairman is W. J. Brown and the speakers are Bernard Braine, M.P., Anthony Greenwood, M.P., Charles Curran



A still from the film

and Sam Pollock. The points discussed are:—(1) Whether the Act is a good or bad one from the point of view of the Landlord. (2) Whether it is good or bad from the point of view of the tenant. (3) The question of Improvements and Conversions.

Before each question the film illustrates the points mentioned in the ensuing discussion, by taking scenes from Birmingham, Stockton and Walthamstow, so that the audience knows what the speakers are referring to. The film ends with an exhortation that the problem of sub-standard houses is above politics and that this Act forms the means whereby the job of improving these houses can be done. The film is for showing to Local Authorities and Organizations and individuals interested in Improvement Conversions.

It is interesting to note that this is in no way an advertising film. Neither the products of Allied Ironfounders, Ltd., nor their activitles, are mentioned during the course of this highly stimulating discussion. The film was produced by Harold Purcell, the discussion producer was Edgar Lustgarten, and the film was made by the Film Producers Guild, Ltd.

● **Prefatile.** By Prefatile (G.B.) Ltd., 78, Buckingham Gate, London, S.W.1. Tel.: Abbey 5291.

A new aluminium roofing recently developed in Austria and used extensively in both Austria and Germany, where it has been in production for the last three years. It may be laid as low as a 9 deg pitch and it weighs only 4 lb per



sq yd. No bolts or other fixings pierce the finished roof surface; there is, however, a system of anchoring which will withstand very high winds. Prefatile can be readily applied to hips and valleys and is capable of being fitted round awkward shapes. Prefatile may be produced in a number of thicknesses to suit particular load and service

Information Digest (continued)

requirements. Standard 24 s.w.g. tiles have been tested to carry a superimposed load of 40 lb per sq ft.

● **T.I. Aluminium Building Sheet.** Issued by Tube Investments Ltd., Redfern Road, Tyseley, Birmingham, 11. Free.

This booklet, again under B.S.1311 size, gives full information on the available types of aluminium corrugated sheet produced by this manufacturer, together with technical data and fixing instructions. One is left wondering why there are so many types and sizes—surely some simplification would economize in production and stocking both by the company and the distributors.



The "Wordsworth" bookcase

● **Furniture for Home Assembly.** E. H. Taylor, Ltd., Beehive Works, Welwyn, Herts. Tel.: Welwyn 100.

E. H. Taylor, Ltd., have turned their hands to the production of prefabricated bookcases which are to be assembled at home. Five designs are available, that illustrated being the "Wordsworth." The bookcases are supplied in cardboard boxes already cut, drilled, jointed and complete with screws, panel pins, screwdriver and glue. The picture frame surround is supplied in Beech or Mahogany, the rest is white fine-grained Melawis. The cabinet may be fixed to the wall without legs and two small doors are supplied to convert the bottom shelf into a cupboard. The back is red Mahogany. Size, 38in high, 41½in long. Shelves, 7½in deep and overall depth 9in. The cost is £7 10s.
Another design, called the "Byron," may be supplied to fit a particular measurement in length and costs £5 10s for one 3ft long and averages approximately 10s per foot increase in length.

● **Inexpensive Fireplaces.** Issued by Bratt Colbran Ltd., 10, Mortimer Street, London, W.1. Museum 9411. Free.

This booklet shows that it is possible to obtain good looking fireplaces at reasonable prices but why such a high proportion of non-continuous burning grates?

● **Marlite,** a new concrete paving by Marley Concrete Products of Peasmarsh, Guildford, Surrey.

Marlite, an attractive and economical outdoor paving, has been introduced into the range of Marley Concrete Products, of Peasmarsh, Guildford, Surrey. It is available in twelve sizes and five colours. The textured, non-slip surfaces are hard-wearing, and the paving is unaffected by frost or bad weather. The ground should be carefully levelled and a bed of fine earth or sand provided. The flags are then laid to the pattern desired, with up to half-inch joints between them. The joints should afterwards be filled in with a 3:1 sand/cement mix. Details of patterns, sizes, colours and prices available on request.

● **Atlas Fluorescent Lighting.** A technical handbook by Thorn Electrical Industries Ltd., 105-109 Judd Street, W.C.1. Telephone: Euston 4433. Free.

The purpose of this new handbook is to provide some practical assistance "on the job" be it in the choice of tube colours, in sorting out circuits, in determining fixing centre or dimensions of Atlas fittings, or in dealing with service problems. Not a textbook on fluorescent lighting or electrical engineering, nor a comprehensive catalogue.

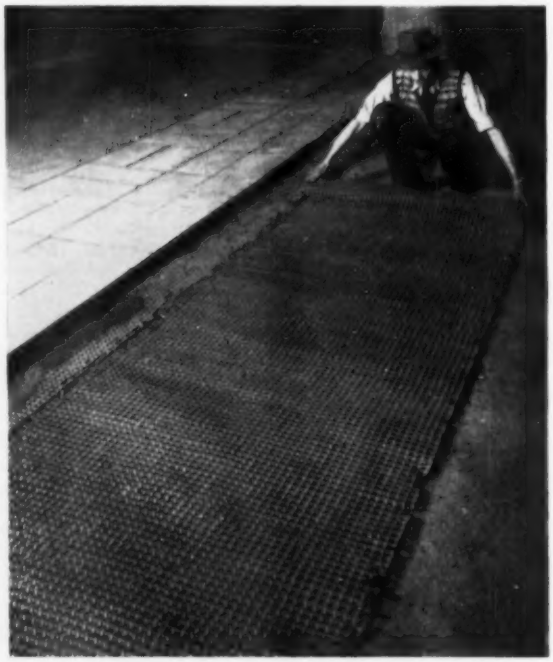
● **Sloan 'Royal' Flush Valves,** from Rowe Bros. & Co. Ltd., at Pall Mall, Liverpool. Telephone: Central 5401.

Rowe Bros. & Co., Ltd., builders' and plumbers' merchants, announce that they have completed arrangements for their associate company, the Bristol Diecasting Company, to manufacture the Sloan Royal Flushvalve, under licence from the Sloan Valve Company of America. Rowe Bros. have produced a catalogue detailing the design, operation and manifold advantages of the Royal Flushvalves. Copies may be obtained from any of the company's branches:—39, Victoria Street, Bristol; Berkley Street, Birmingham, 1; 33, Queen Street, Exeter; Pall Mall, Liverpool; 10, Dover Street, London, W.1; Trading Estate, Bridgend, Glamorgan; 54 Coronation Street, Blackpool, and from Rowe Bros. & Co. (Scotland), Ltd., 109, New City Road, Glasgow, C.4.

● **"Quil-Lath."** By A. Quiligotti & Co. Ltd., Milton Street, Plymouth Grove, Manchester 13. Tel.: Ardwick 1791.

A new method of fixing all types of floor tiles. This clay lath between the tile bed and the concrete base ensures that settlement and contraction cracks will not be transferred through to the finished floor. A 100 per cent guarantee of efficiency is claimed.

[Continued on page 739



Laying Quil-Lath

THIS WINTER

continue concreting without interruption

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'417 cement'

Quick setting—Extra rapid hardening

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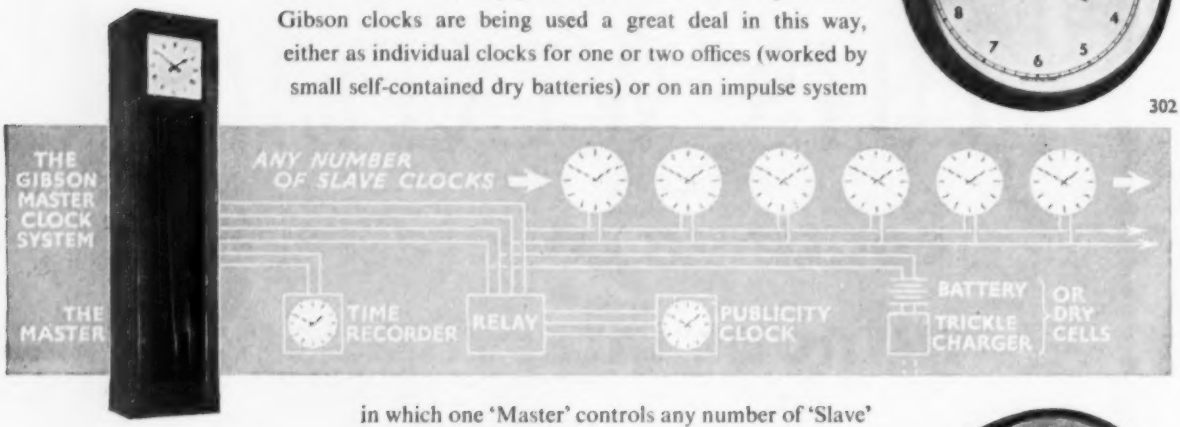
PORTLAND HOUSE, TOTHILL STREET, LONDON, SW1
G. & T. EARLE LTD., HULL
THE SOUTH WALES PORTLAND CEMENT & LIME CO. LTD., PENARTH, GLAM.

PLAN for CLOCKS

In the newest and best buildings the clocks are regarded both as architectural features and essential amenities; they go in before the walls are plastered. Gibson clocks are being used a great deal in this way, either as individual clocks for one or two offices (worked by small self-contained dry batteries) or on an impulse system



302



in which one 'Master' controls any number of 'Slave' clocks. This method is very accurate and has the advantage of being independent of power fluctuations. Available designs are good—specific designs can be carried out.

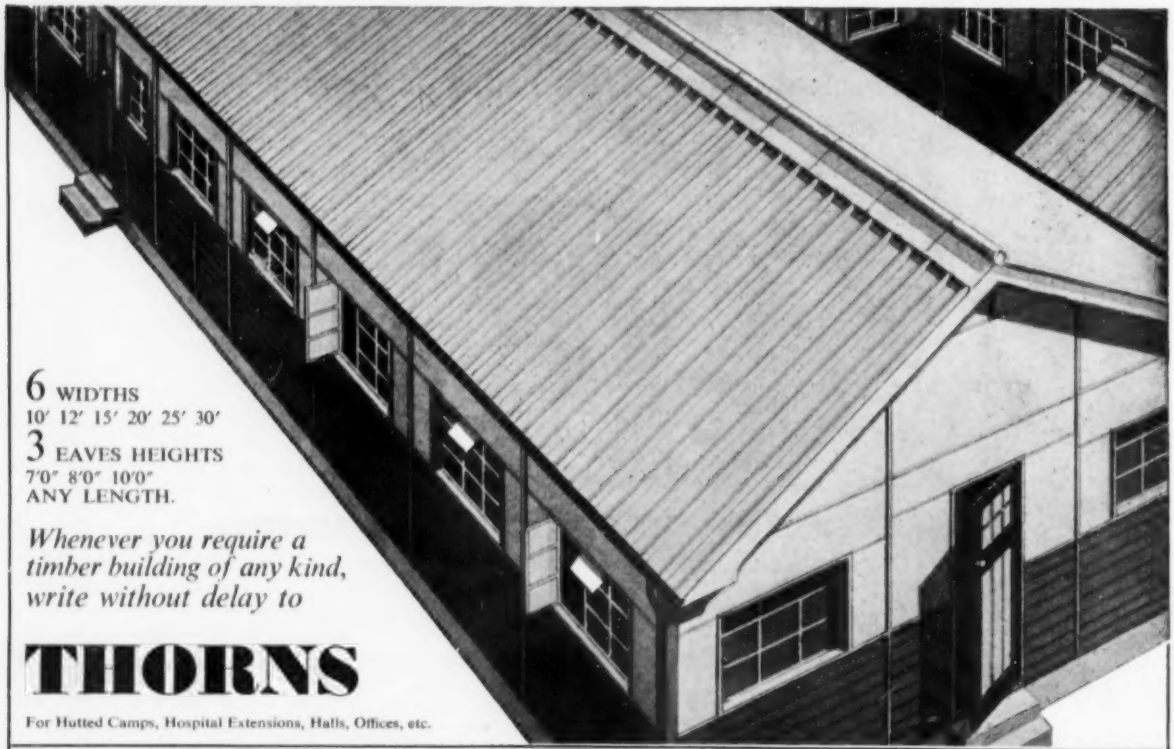
Gibson CLOCKS

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3 EAVES HEIGHTS
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ANY LENGTH.

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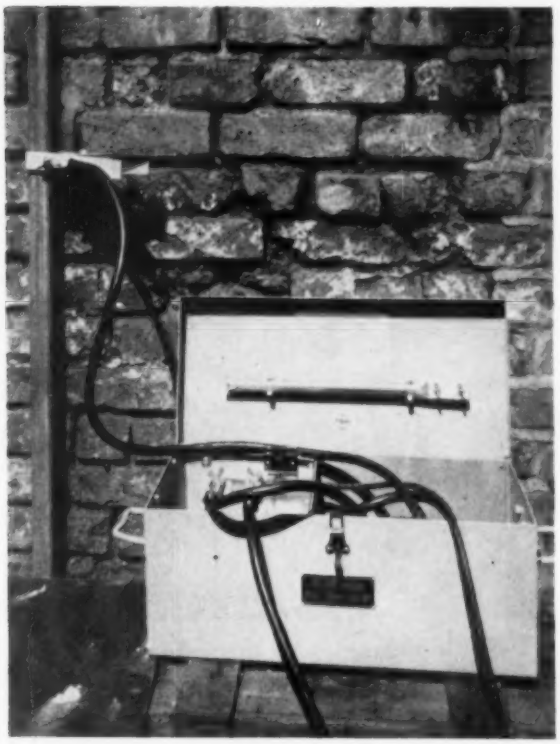
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Telephone: Bexleyheath 305. Established 1896.

BD 530

Information Digest (continued)



● **Radford Defroster.** By Messrs. Radford Electronics Ltd., 149, Newfoundland Road, Bristol, 2.

This new piece of electrical equipment designed for the unfreezing of pipes is comprised essentially of a step-down transformer which can be run from any normal alternating current supply point. Two heavy duty cables connected to the machine are attached to the pipe on either side of the ice plug. The current is allowed to flow until the plug is melted and the pipe is performing normally. Operation is completely foolproof since the low voltage applied to the pipe is entirely harmless to anyone handling the cables. The capacity of the Defroster is 2 kW, sufficient to melt ice in a ½in pipe at the rate of over 9ft a minute. Plastic pipes can be treated if a satisfactory electrical contact can be made with the water.

● **The Pectosol Method of Soil Stabilization.** From Soil Roads Ltd., Gerrards Cross, Bucks.

For the first time it is claimed almost any soil can now be turned into a firm, brick-hard surface to any required depth by the addition of a powder. The process is the result of many years research and basically consists of a compound of cement and ground nut shells in powder form. It makes possible the construction of roads, airfields, car parks, hardstandings and high quality building blocks from the soil on the site. No material other than the addition of Pectosol powder is needed.

The process is a development of work by Mr. H. E. Brooke-Bradley, Deputy County Surveyor of Worcestershire. It has had long practical tests in this country and has been successfully used in many places both in Britain and the Commonwealth, for main, secondary and farm roads and has also been used to form the berm of a sea wall which was being strengthened following the severe East Coast floods of 1953. The method was given a particularly severe test by the Essex River Board who used it on a section of the wall along the south bank of the river Crouch in the autumn of 1953. The area had been badly flooded and the heavy clay soil was in a very sticky condition. In spite of this the soil was successfully stabilized and has subsequently been used as a hard roadway for construction traffic including a light-gauge railway track.

The method of application is both simple and speedy. In the making of roads the soil is thoroughly tilled to the required depth—usually 6in to 8in—by the use of a cultivator or a rotary hoe; 5 per cent Pectosol having previously been spread over the ground. Hand tests of the consistency of the tilled soil suffice to show whether the moisture content is adequate or whether more water or further drying is necessary. The mix is then consolidated by rolling and can be laid with tarmac or asphalt if necessary. Concrete can be laid directly without insulation between raft and base because of the smooth finish which can be given to the base.

The Pectosol method has many advantages; being water resistant it is not subject to damage by frost or sun, in many cases roads can be used almost immediately. The cost is often less than half that of conventional methods of construction and is approximately twice as fast.

In the making of building blocks five unskilled labourers can produce approximately 140 blocks (12in × 6in × 4in) per hour, the only equipment needed being a mixer and block-making machine. Normally it is possible to make use of the soil on the site thus eliminating transport costs and delays.



Pectosol soil stabilization by the berm of a sea wall in Essex.

● **Protective Clothing.** The Contractors' Tools Department of George Cohen Sons & Company Ltd., Wood Lane, W.12.

A further catalogue listing the wide range of protective clothing of all kinds which the company handles. Among the new items shown are sturdy calf length rubber boots—an addition to the range which should prove very popular in view of the confirmed habit of so many wearers of turning down the top part of the standard length boot! Another interesting point is that all P.V.C. clothing listed in the new catalogue has fully welded seams.

[Continued on page 740

Information Digest (continued)

● **Trussed Concrete Review, No. 5,** from The Trussed Concrete Steel Co. Ltd., Truscon House, Lower Marsh, S.E.1. Telephone: Waterloo 6922. Free.

Contains a short description of the Diagrid system of construction with pictures and diagrams, related to the new printing works for Boots Pure Drug Co., Ltd.

● **Pitman Autumn list,** from Sir Isaac Pitman & Sons Ltd., 39-41 Parker Street, Kingsway, W.C.2. Telephone: Holborn 9791.

A list of books Pitmans intend publishing up to the end of this year. Among those listed in the Technical section are, "A General History of Architecture," by Bruce Allsopp; "Architectural Hygiene," by the late Sir Banister Fletcher, 9th Edition; "Hospital Planning Requirements," by Guy Aldis; and "Soil Mechanics Related to Building," by John H. G. King.

● **Tea Please.** From James Stott & Co. (Engineers) Ltd., Vernon Works, Oldham, Lancs.

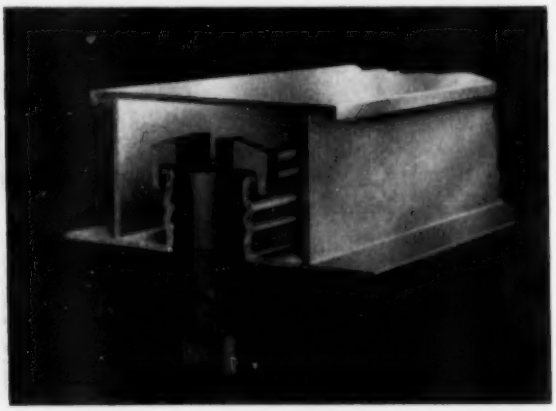
An illustrated brochure showing a wide variety of tea-making equipment, ranging from the café set to a complete canteen kitchen. Water heaters are shown that use gas, electricity or steam. However, this book is more than just a trade catalogue, the planning of an efficient tea service is discussed and many other aspects are illustrated.

● **International Lighting Review, No. 6,** from Philips Electrical Ltd., Century House, Shaftesbury Avenue, W.C. Free.

A well produced booklet containing several examples of specialist applications of lighting. Good reading as well as good looking.

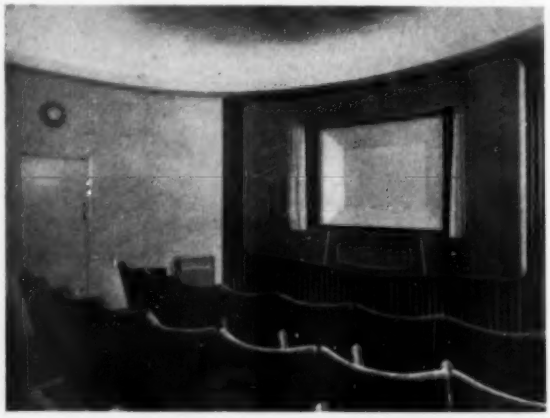
● **"Invertrunking."** By The British Thomson-Houston Company Ltd., Crown House, Aldwych, London, W.C.2.

This is a new form of inverted trunking or conduiting, carrying wiring and cables, lighting and other electrical fittings, which may be quickly and simply attached by means of T-bolts.
It consists basically of a one-piece aluminium extrusion, which is joined by a channel section where necessary. A



Extruded section and T-bolt

spring steel cover fillet completes the section when all wiring is in position; similarly it is only necessary to remove this when alterations to the circuits or fittings are needed.
Overall dimensions are—width 4in, depth 1.11/16in. Angle, Tee and Crossover sections are available to order. "Invertrunking" may be mounted flush on to beams or structural ceilings, or cast *in situ* (when a protective coat of bituminous paint is necessary). It can be used with plaster, either faired into a shallow cove or used with expanded metal to provide deep coves.
It has been designed with the suspended ceiling in mind, and the broad flanges support standard forms of ceiling tiles or boards. Circuit wiring may be inserted after the ceiling is completed and the use of a new type of BTH connector block, called the Parablock, at intervals in the main wiring allows lighting layouts to be simply and quickly altered. The illustration shows a section of Invertrunking in extruded aluminium with a Tee-bolt used to suspend lighting and other fittings.
This new system of trunking can be seen in the new lighting showroom at Crown House. Titled "Lighting through the Ages," 75 years of the electric lamp are illustrated by means of pictures and actual examples.



● **A Miniature Cinema.** For The Gas Council, 1, Grosvenor Place, London, S.W.1. Tel.: Sloane 4554.

A fully equipped cinema in miniature for showing both 16mm and 35mm films has been built in Gas Industry House. Originally an office, it has been converted to hold 20 people and it is believed to be the smallest in the world. The cinema was designed by the Gas Council's Exhibition Department in conjunction with the Film Department and the Contractors, David Esdaile & Co., Ltd. The auditorium and the projection box are sound-proof and both are mechanically ventilated.

ALSO RECEIVED

● **Annual Report No. 87,** from the Builders' Clerks' Benevolent Institution, 47 Bedford Square, W.C.1.

● **Mitchell Report No. 2.** Mechanical Wagon-Marshalling System. Published by Mitchell Engineering Ltd., 1 Bedford Square, W.C.1.

● **Aerial Survey Review No. 7.** Published by Hunting Aerosurveys Ltd., 29 Old Bond Street, London, W.1. Telephone: Regent 5211.

● **Annual Report.** The Sutton Dwellings Trust.

● **Annual Report.** Summary of Annual Report 1952 by Inter-American Housing Centre, Bogota, Colombia. For the Division of Housing and Planning Department of Economic and Social Affairs and Pan American Union, Washington, D.C. Free.

● **Clerical Salaries Analysis 1954.** Published by The Office Management Association Limited., 8 Hill Street, London, W.1. Price 25/-.

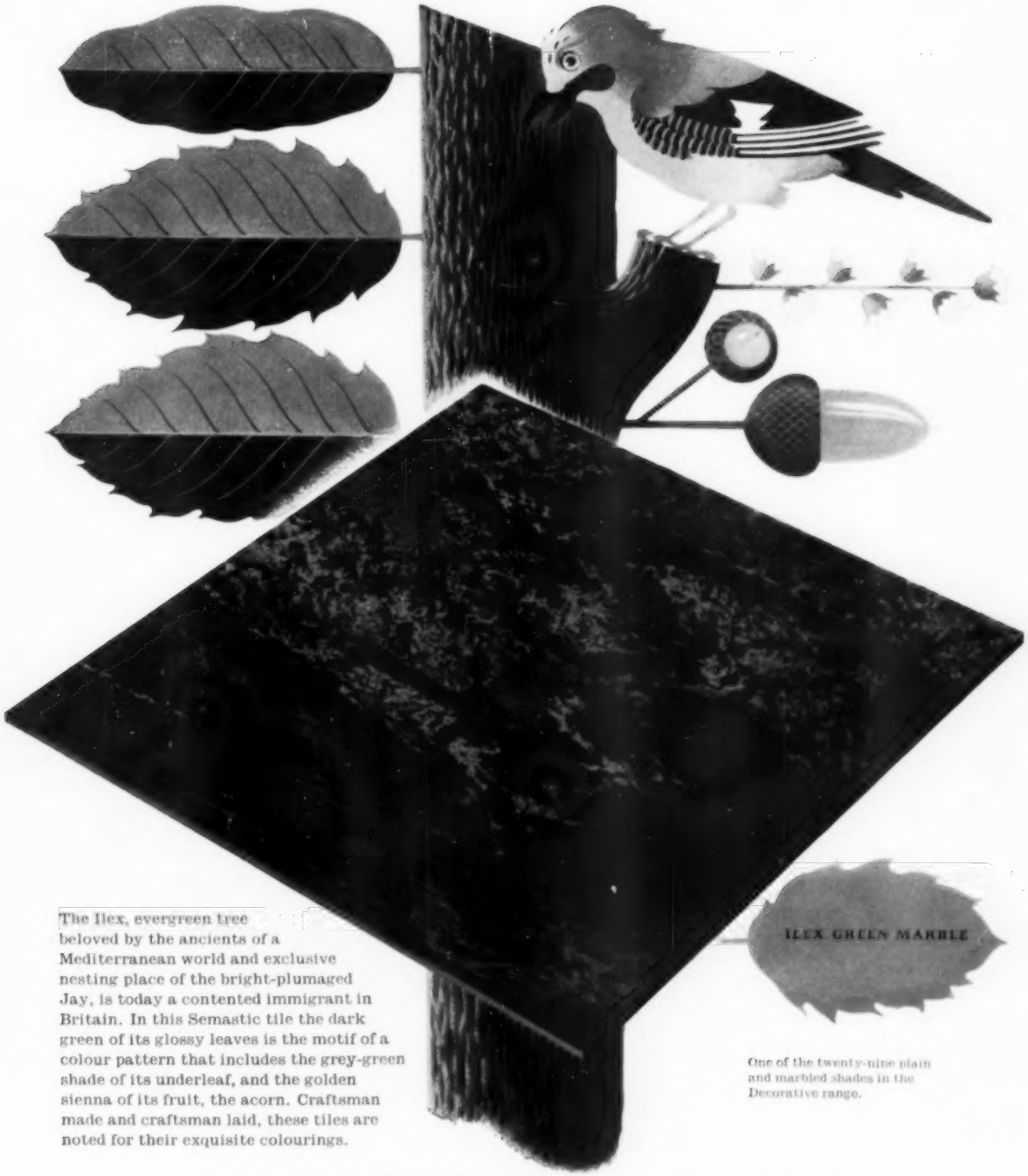
● **The Journal of the Commons, Open Spaces and Footpaths Preservation Society.** 71 Eccleston Square, Westminster, S.W.1. Price 2/-.

● **Northern Ireland Housing Trust.** Ninth Annual Report 1953-54. From 12 Hope Street, Belfast, Northern Ireland. Price 2/-.

A well-produced, well-illustrated and informative report presented to the Minister of Health and Local Government in accordance with Section 20 of the Housing Act (Northern Ireland), 1945.

● **Medallic Craftsmanship.** By John Pinches, Head Office, 21 Albert Embankment, London, S.E.11.

● **Unia Patent Concrete Panel Buildings,** from Unia Ltd., Victoria Street, Barnstaple. Telephone: Barnstaple 2248/9. Free.



The Ilex, evergreen tree beloved by the ancients of a Mediterranean world and exclusive nesting place of the bright-plumaged Jay, is today a contented immigrant in Britain. In this Semastic tile the dark green of its glossy leaves is the motif of a colour pattern that includes the grey-green shade of its underleaf, and the golden sienna of its fruit, the acorn. Craftsman made and craftsman laid, these tiles are noted for their exquisite colourings.

One of the twenty-nine plain and marbled shades in the Decorative range.

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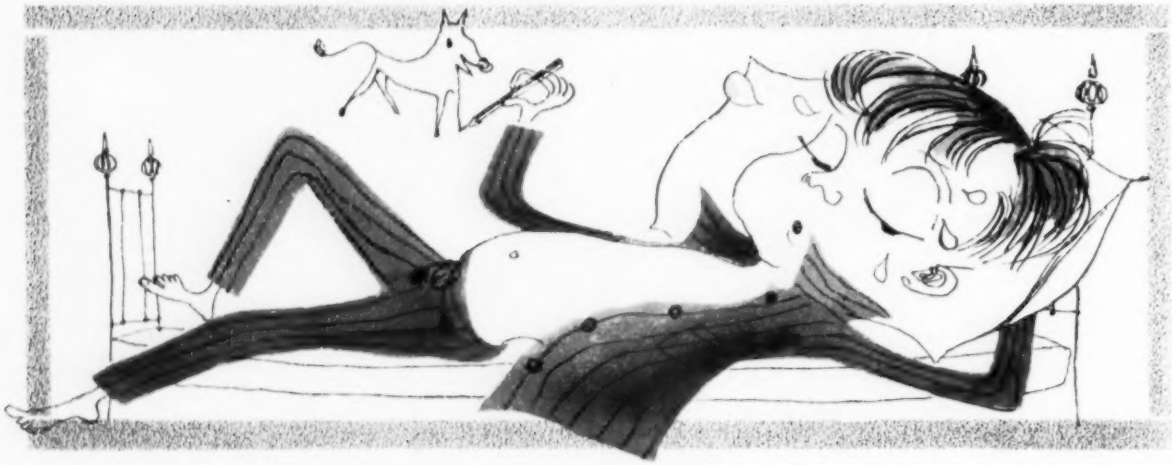
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452/57



Meet Timothy Percival Augustus

after his bath and about to be embedded. From a steaming hot bathroom he is crossing an Alaskan landing to enter an Arctic bedroom. No wonder he's always catching cold — he lives in a sieve ! Yes, a house that leaks heat in all directions, especially through the roof. The architect who designed it should be made to wash all Tim's hankies . . . What's to do about it? ✳

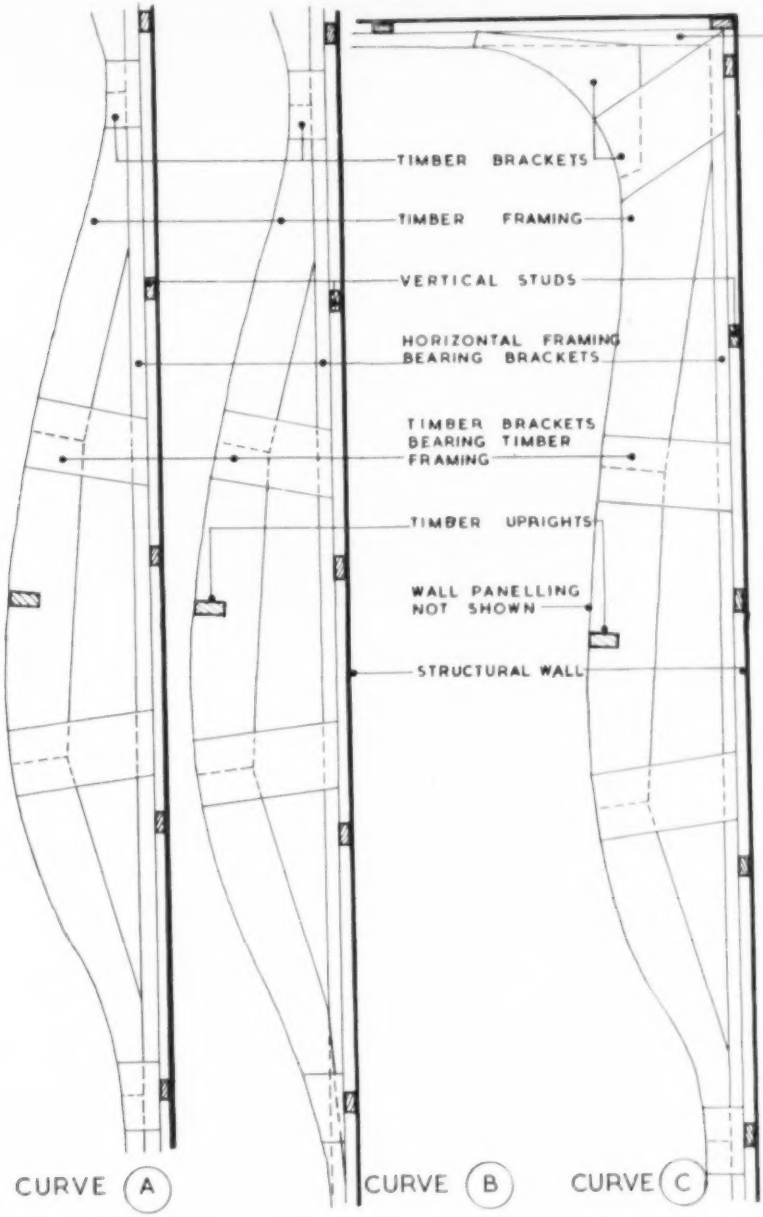


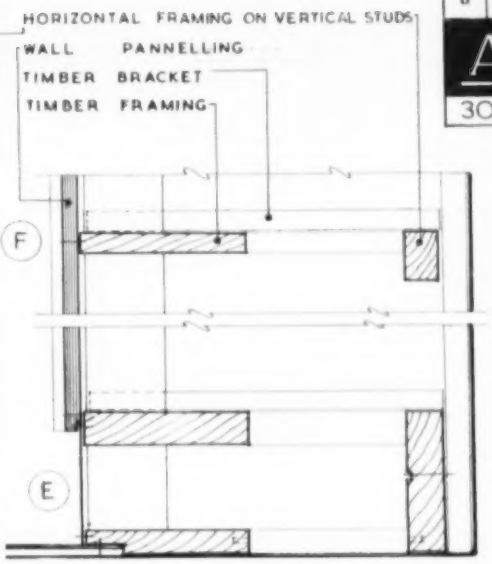
Meet Timothy Percival Augustus, drawing rude horses on the wall, because he's too hot to sleep, because there's no roof insulation to keep the house cool, because the architect didn't know, didn't care, or forgot to . . . ✳

*wrap him in **FIBREGLASS** TRADE MARK

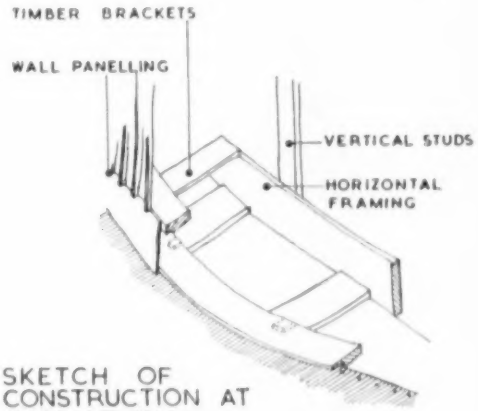
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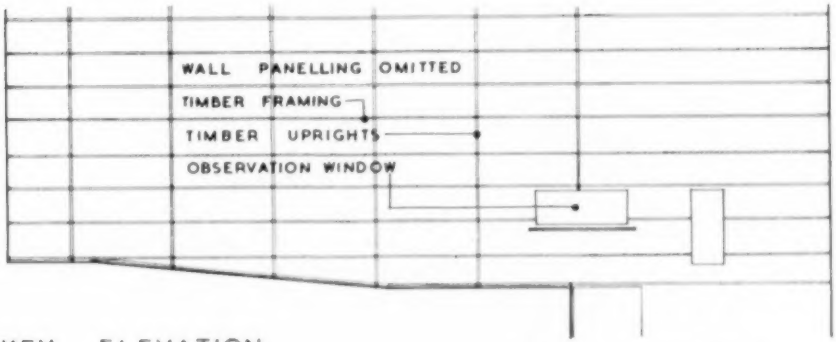




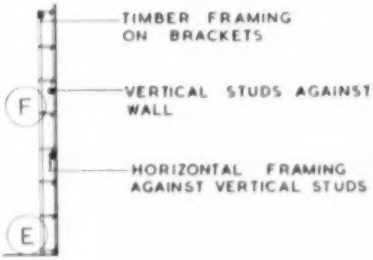
DETAIL SECTION • 1/8 F.S.



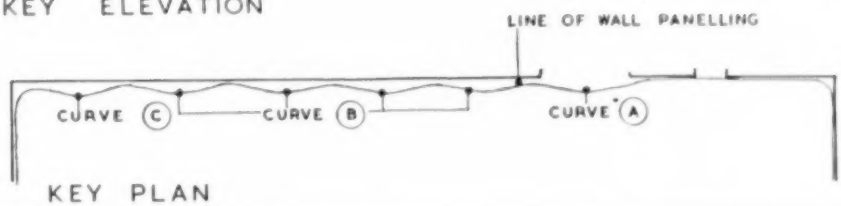
SKETCH OF CONSTRUCTION AT BASE OF WALL.



KEY ELEVATION



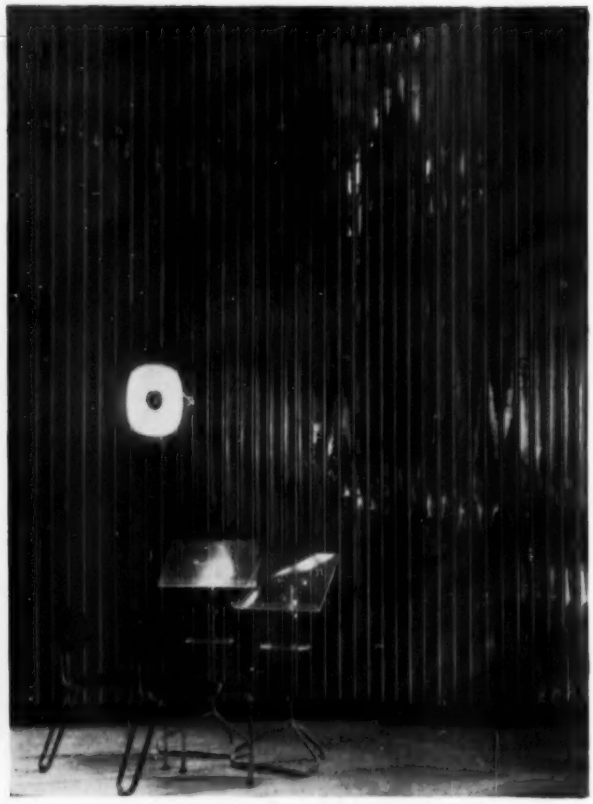
SECTION D-D



KEY PLAN

STUDIO WALL. RADIO CENTRE . HANOVER • KRAEMER LICHTENHAHN OESTERLEN PARTNERSHIP





STUDIO WALL, RADIO CENTRE, HANOVER

ARCHITECTS: KRAEMER, LICHTENHAHN, OESTERLEN PARTNERSHIP

CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

AMESBURY R.C. (a) 12 houses, Milston. (b) Messrs. Bothams and Brown, 32, Chipper Lane, Salisbury. (c) 2gns. (d) Dec. 13.

* * *

ASHTON-UNDER-LYNE B.C. (a) 29 old people's bungalows in Henrietta Street and Turner Lane. (b) Borough Engineer and Surveyor, Municipal Offices. (c) 3gns. (e) Dec. 20.

* * *

BATHAVON R.C. (a) 10 bungalows with site works, Red Post site, Peasedown, near Bath. (b) A. F. Hobbs, 8, Cleveland Place East, Bath. (c) 2gns cheque payable to Bathavon R.D.C. (e) Dec. 22.

* * *

BIRKENHEAD B.C. (a) Secondary school, Woodchurch Estate. (b) Borough Architect, 3, Conway Street. (c) 2gns. Dec. 18. (e) Jan. 24

* * *

CARLISLE C.C. (a) Erection of a crematorium. (b) City Surveyor, 18, Fisher Street. (c) 2gns. (e) Jan. 4.

* * *

CHINGFORD B.C. (a) 28 houses, Tower Estate, Epping (Contract D). (b) Borough Engineer, Town Hall, Chingford, E.4. (c) 2gns. (e) Jan. 5.

* * *

CRAYFORD U.C. (a) 102 dwellings and block of 18 garages, Normandy Farm (Housing Scheme 38). (b) Engineer and Surveyor, Town Hall; giving details of comparable schemes carried out. (d) Dec. 16.

* * *

CUCKFIELD R.C. (a) 8 dwellings at Sharpthorne, West Hoathley, Sussex (Contract 106). (b) Engineer and Surveyor, Rural Council Offices, Boltro Road, Haywards Heath. (c) 2gns. (e) Jan. 10.

* * *

DOVER B.C. (a) (Contract No. 47) 26 houses with services and site works, St. David's Avenue, Avcliffe Estate. (b) Borough Engineer, Brook House. (c) 2gns. (e) Dec. 21.

* * *

EAST BARNET U.C. (a) (Contract No. 799) 13 garages with access roads and drainage, Bevan and Cockfosters Estates. (b) Engineer and Surveyor, Town Hall, Station Road, New Barnet, Herts. (c) 2gns. (e) Dec. 20.

* * *

ESSEX C.C. (a) (1) erection of West Hatch secondary technical school, approx. cost £250,000. Architects, Messrs. Richard Sheppard and Partners, 16, Bedford Place, London, W.C.1. (2) erection of Harlow Tye Green and Latton Common primary schools, approx. cost £89,000. Architects, Messrs. Farquharson and McMorran, 14, North Audley Street, London, W.1. (3) erection of North Walthamstow secondary technical school, approx. cost £190,000. Architects, Messrs. Tooley and Foster, Midland Bank Chambers, Buckhurst Hill, Essex. (b) County Architect, County Hall, Chelmsford. (d) Dec. 13.

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FARNHAM U.C. (a) 70 houses comprising 11 blocks and 5 pairs, Wrecclesham site. (b) Messrs. A. J. and L. R. Stedman, South Street. (c) £2. (e) Dec. 29.

* * *

GRIMSBY B.C. (a) Erection of a special day school at Carnforth Crescent. Tenders for (1) general building contract for foundations, superstructure, etc.; (2) heating and hot water installations; (3) electrical installations. (b) Engineer and Surveyor, Municipal Offices, Town Hall Square. (c) £5 each contract. (e) Dec. 31.

* * *

HALIFAX B.C. (a) Erection of (1) 22 bungalows, Tewit Lane, Illingworth; (2) 16 bungalows, Weatherhouse Terrace, Pellon; (3) 18 bungalows, Backhold Estate, Siddal; (4) 16 bungalows, Cousin Lane, Ovenden, and 9 bungalows, Myrtle Place, Ovenden. (b) Borough Engineer, Town Hall; separate contracts. (c) £2. (d) Dec. 17.

* * *

HAMPSHIRE C.C. (a) Erection of Eastleigh grammar school in steel-framed prefabricated construction of 45,000 sq ft. (b) County Architect, The Castle, Winchester; giving particulars of recent similar contracts undertaken. (d) Dec. 31.

* * *

HAMPSHIRE C.C. (a) Erection of a secondary school at Gosport. (b) County Architect, The Castle, Winchester; giving details of recent similar contracts undertaken. (d) Dec. 18.

* * *

HARPENDEN U.C. (a) 5 shops and flats over, Batford Estate. (b) Clerk of the Council, Harpenden Hall. (c) 1gn. (d) Dec. 15. (e) Jan. 10.

* * *

HORSHAM U.C. (a) 2 shops and 4 flats, Needles Estate. (b) Engineer and Surveyor, Council Offices, Horsham Park. (c) 2gns. (e) Dec. 22.

* * *

ILFORD B.C. (a) 7 garages at Beehive Court, Beehive Lane. (b) Borough Engineer, Town Hall. (c) 2gns. (e) Dec. 21.

* * *

ILFORD B.C. (a) Erection of (1) Beal grammar/technical school; (2) Downshall school, craft block; (3) Mossford primary school. (b) Borough Engineer, Town Hall. (d) Dec. 13. (e) Jan. 25.

* * *

LINDSEY C.C. (a) Erection of junior school near Rochdale Road, Scunthorpe. (b) Messrs. Gollins, Melvin, Ward and Partners, 15, Manchester Square, London, W.1. (d) Dec. 21. (e) Feb. 7.

* * *

LIVERPOOL C.C. (a) Extension to Fire Station, Durning Road, Liverpool, 7. (b) Engineer and Surveyor, Municipal Buildings, 2. (e) Dec. 16.

* * *

LOWESTOFT B.C. (a) Erection of office extensions, Normanston Nurseries, Normanston Drive. (b) Borough Engineer, 49, High Street. (c) 1gn. (e) Dec. 28.

* * *

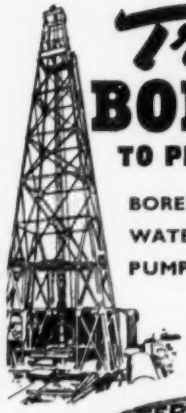
MARTLEY R.C. (a) 14 houses at Sandhampton, Astley. (b) E. J. Turner, 1, The Tything, Worcester. (c) 2gns. (e) Dec. 29.

* * *

NANTWICH U.C. (a) 40 houses, Marsh Lane. (b) Engineer and Surveyor, Brookfield House. (c) 2gns payable to Council. (e) Dec. 20.

* * *

NEW FOREST R.C. (a) Conversion of the "New Room," Minstead, into 2 bungalows. (b) Engineer and Surveyor, Council Offices, Lyndhurst, Hants. (c) 2gns. (e) Dec. 20.



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THE TERRADURA FLOORING Co. Ltd.
PROVIDENCE WORKS, NORTON STREET, MILES PLATTING, MANCHESTER, 10.

NEW SARUM C.C. (a) 18 houses, Bemerton Heath Estate, Salisbury. (b) City Engineer, The Council House, Salisbury. (c) 2gns. (e) Dec. 20.

* * *

N. IRELAND—BELFAST C.C. (a) Erection of (1) a single-storey building of reinforced concrete and brick, for substation; (2) construction of reinforced concrete foundations for outdoor transformer; (3) erection of site boundary walls; (4) construction of foundation piling. (b) Messrs. Merz and McLellan, Carliol House, Newcastle-upon-Tyne, 1. (c) 5gns. (e) Dec. 31.

* * *

N. IRELAND—COLERAINE. (a) Erection and completion of a block, consisting of dormitories, refectory and laundry, at Loreto Convent, Coleraine, Co. Derry. (b) Messrs. F. M. Corr and W. H. D. McCormick, 7, Ferryquay Street, Derry. (c) 5gns. (e) Dec. 22.

* * *

N. IRELAND—ULSTER SCHOOLS FOR THE DEAF AND BLIND. (a) Adaptation of "Unagh," Jordanstown, Co. Antrim, as a nursery school. (b) Messrs. W. H. Stephens and Sons, 13, Donegall Square North, Belfast. (c) 5gns. (e) Jan. 10.

* * *

NORTHWICH R.C. (a) 10 houses and 4 bungalows, Nether Peover. (b) Engineer and Surveyor, Whitehall, Hartford, Northwich. (c) 1gn. (e) Tenders as soon as possible.

* * *

PLOUGHLEY R.C. (a) 3 pairs of 3-bedroomed houses and 4 pairs of 2-bedroomed houses, Yarnton, Oxfordshire. (b) Engineer and Surveyor, Waverley House, Bicester. (c) £2. (e) Dec. 22.

* * *

SCOTLAND—FIFE C.C. (a) Erection of primary school at Mountfleurie, Leven. (b) Messrs. James Gentles and Son, Osborne House, Kirkcaldy.

* * *

SCOTLAND — QUEENSFERRY B.C. (a) 32 houses, Station Road, South Queensferry; separate trades. (b) Town Clerk, Council Chambers, South Queensferry. (d) Dec. 13.

* * *

SCOTLAND — SUTHERLAND C.C. (a) 2 blocks of 4-apartment houses, Dornoch. Separate trades. (b) County Architect, County Offices, Dornoch. (e) Dec. 29.

* * *

SOUTH CAMBRIDGESHIRE R.C. (a) 1 block of 4 houses, Little Grandsden Estate. (b) Council's Architect, County Hall, Hobson Street, Cambridge. (c) 2gns. (e) Dec. 28.

* * *

WEST SUSSEX C.C. (a) (1) 2 police houses, office and garage at Barnham; (2) pair of police houses, High Street, Steyning; (3) 2 pairs of police houses and a garage at Petworth; (4) 2 pairs of police houses at Parklands, Chichester. (b) County Architect, County Hall, Chichester. (d) Dec. 17.

* * *

WOKINGHAM R.C. (a) Erection of garages, workshops, canteens and sanitary accommodation at the Council's Central Works Depot, Grovelands Avenue, Watmore Lane, Winnersh. (b) Council's Surveyor, Council Offices, Shute End. (e) Dec. 23.

* * *

WORCESTER C.C. (a) 20 houses in terraces of 4, Mayfield site. (b) City Engineer, 22, Bridge Street. (c) 3gns. (e) Dec. 31.

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* * *

TETTENHALL U.C. Applications for inclusion on the following lists should be forwarded to the Clerk of the Council, Council Offices, Upper Green, Tettenhall, Staffs, by December 11. Contractors capable of undertaking (a) building contracts up to £10,000, (b) building contracts between £10,000 and £50,000, (c) building contracts over £50,000, (d) civil engineering contracts up to £10,000. (e) civil engineering contracts between £10,000 and £50,000, (f) civil engineering contracts over £50,000.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

LAMBETH B.C. (1) Erection of slipper baths establishment. (3) Prestige and Co., Ltd., 149, Grosvenor Road, London, S.W.1. (4) £119,856.

* * *

LONDON COUNTY COUNCIL. (1) Repair and extension of Sessions House. (2) Newington Causeway, S.E.1. (3) Gee, Walker and Slater, Ltd., 100, Park Lane, London, W.1. (4) £394,800.

* * *

LONDON COUNTY COUNCIL. (1) 96 flats. (2) Friary Estate, Camberwell. (3) Unit Construction Co., Ltd., Feltham, Middlesex. (4) £174,703. (1) Flats, shops, etc. (2) Cleveland Way, Stepney. (3) H. Webb (Builders), Ltd., Romford. (4) £57,383.

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WARWICKSHIRE C.C. (1) Blackdown Secondary School. (2) Leamington Spa. (3) Thos. Lowe and Sons, Ltd., Cherry Street, Birmingham. (4) £173,226.

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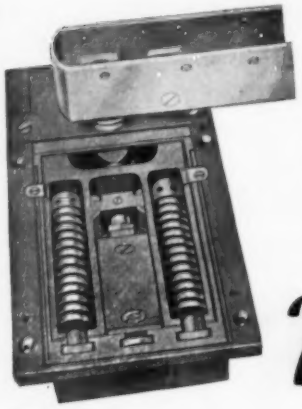


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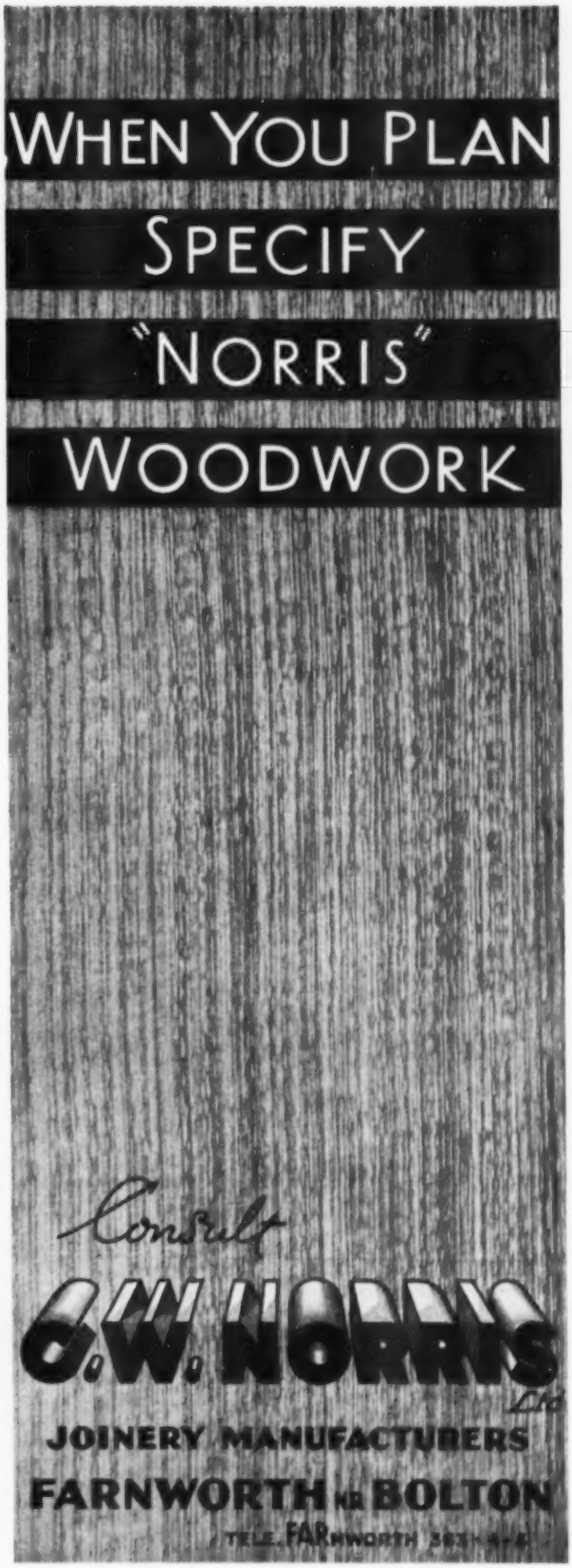
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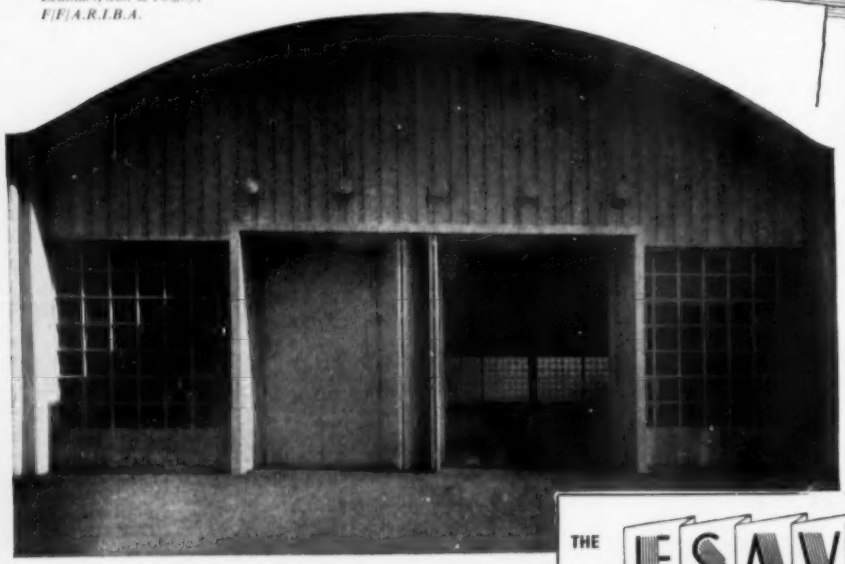
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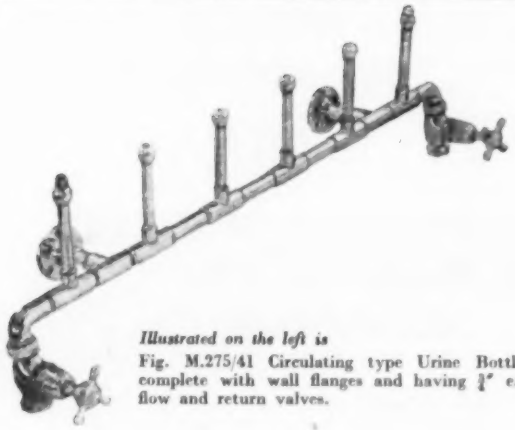
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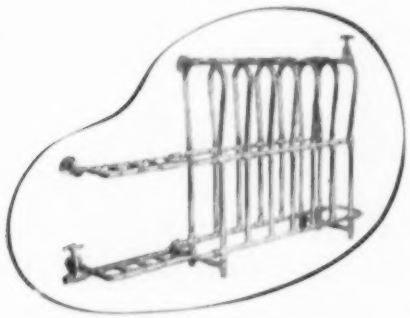
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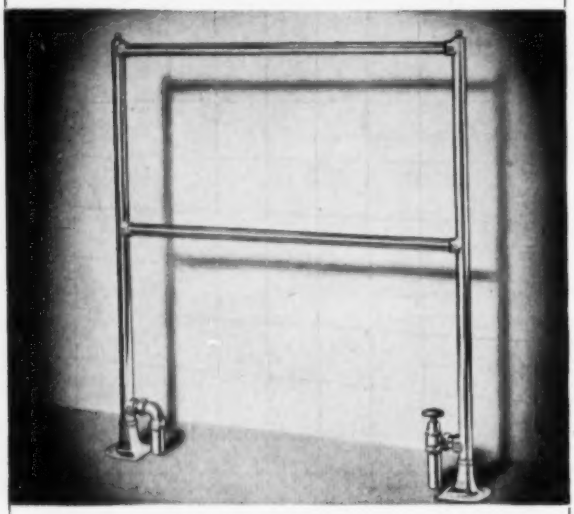
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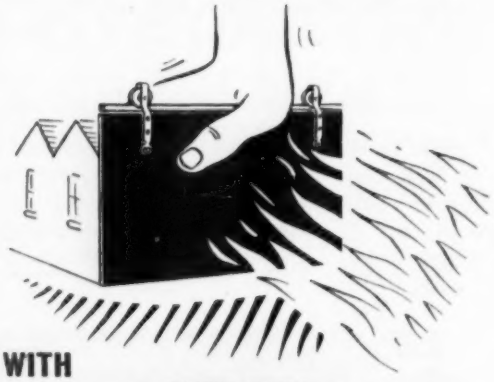
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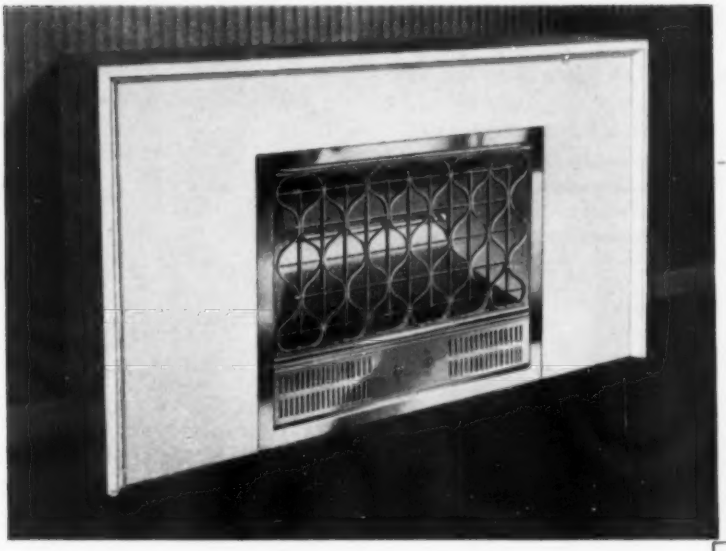
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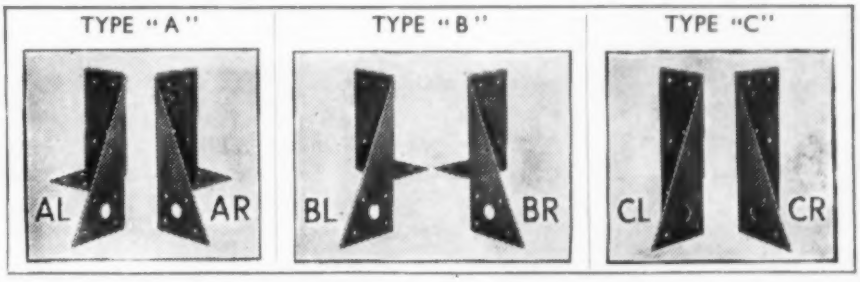
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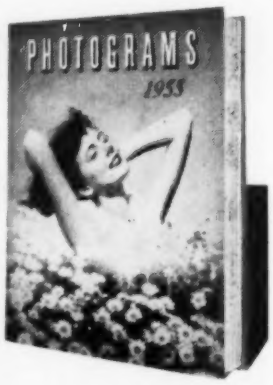
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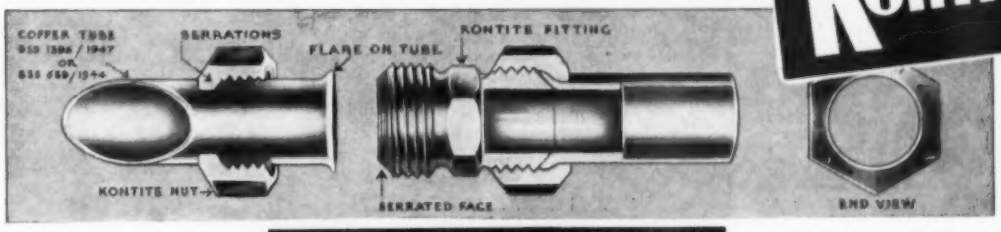


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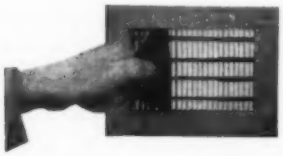
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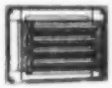
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PRESS NOTICE

DECEMBER 23rd issue closing for press 10 A.M. FRIDAY DECEMBER 17th.
DECEMBER 30th issue, 10 A.M. WEDNESDAY DECEMBER 22nd.

APPOINTMENTS

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order, 1952.

MINISTRY OF WORKS.

ARCHITECTURAL ASSISTANTS required for drawing offices in London, Edinburgh and various provincial offices, including Aldermaston, Berks; Harwell, Berks; Nancekuke, Cornwall; Ranskill, Notts; and Bishopton, Renfrew.

Candidates must have had at least three years' architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. standard.

London salary £442—£695 per annum. Rates elsewhere slightly less. Starting pay according to age and experience. Prospects of promotion and establishment.

State age, full details of training and experience and office desired, to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(G), Abell House, John Islip Street, London, S.W.1. [8537

KINGSWOOD U.D.C. (BRISTOL)

SURVEYOR OF THE COUNCIL

APPLICATIONS for this vacancy by Monday, 20th December, must set out detailed experience under each section of local government work; posts held with dates, age, two testimonials, qualifications, etc. (Corporate Members of the Institution of Civil Engineers and/or hold the testamur of the Institution of Municipal Engineers. Architectural qualifications and experience would be an additional recommendation). The duties must be taken up not later than the 31st March, 1955.

Salary £920 with three increments of £57 10s to £1,092 10s. (New National Scales and conditions and all future recommendations implemented automatically.) As Kingswood (19,000 population approx.) is on the Gloucestershire fringe of Bristol City, it is being rapidly developed and it needs a Surveyor of vision, initiative and experience.

A house will be offered.

I. H. DEARNLEY,
Clerk of the Council.

Council Offices,
Kingswood, Bristol. [8615

COUNTY COUNCIL OF THE COUNTY OF LANARK.

PROPERTY DEPARTMENT.

APPLICATIONS are invited for ARCHITECTURAL ASSISTANTS on A.P.T. Grade VII (£745-£820) and A.P.T. Grade V (£630-£680). Must have thorough knowledge of all architectural work with practical experience in design and preparation of working drawings for erection of schools, public buildings and police houses, etc. Placing according to qualifications and experience.

Posts superannuable. Medical examination. No canvassing.

Applications stating age, qualifications and experience, together with the names and addresses of three referees, to be sent to W. R. Watt, County Architect, 34, Albert Street, Motherwell, not later than December 18, 1954.

WM. C. BROWNLIE,
County Clerk.

Lanarkshire House,
191, Ingram Street,
Glasgow, C.1. [8608

APPOINTMENTS—contd.

MINISTRY OF WORKS.

LEADING ARCHITECTURAL ASSISTANTS required for drawing offices in the Chief Architect's Division in London, Edinburgh and various provincial offices.

Candidates must have had at least three years' architectural training, good experience in an architect's office, and be of Intermediate R.I.B.A. standard. London salary £710 to £834 per annum. Rates elsewhere slightly less. Starting pay according to experience. Prospects of promotion and establishment.

State age, full details of training and experience and office desired, to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(G), Abell House, John Islip Street, London, S.W.1. [8525

CHURCH URBAN DISTRICT COUNCIL.

ENGINEER & SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited for the temporary appointment of Architectural Assistant at a salary in accordance with the new Grade II (£560—£640).

Candidates must have passed the R.I.B.A., intermediate examination or its equivalent at one of the recognised schools of architecture, and be competent to assist in the preparation of housing schemes.

Applications stating age, present and previous appointments, qualifications and experience, and accompanied by copies of two recent testimonials must be received by the undersigned not later than 18th December, 1954.

A. SMITH,
Acting Clerk to the Council.

Council Offices,
Church,
Nr. Accrington,
Lancs. [8589

MINISTRY of Education requires, for England only, H.M. INSPECTORS (men and women), preferably under 50. Appropriate professional qualifications and teaching and practical experience desirable in Architecture, Clothing Trades, Food Technology and Catering, Engineering (Chemical, Mechanical or Production), Management Studies, Metallurgy, or Mining.

Posts permanent and pensionable. Inclusive salary: London, £1,185 by 12 increments to £1,725 (men); £1,080 by 11 increments to £1,550 (women). Elsewhere slightly less. A few posts carry £100 allowance. Appointments may exceptionally be made above the minimum. Higher posts filled by promotion.

Application form from the Secretary (Inspectors' Section), Ministry of Education, Curzon Street, London, W.1. Closing date 28th February. [8588

CITY OF BIRMINGHAM

CITY ARCHITECT'S DEPARTMENT

APPLICATIONS are invited for the following appointments in the Housing Design Section, which is responsible for a large housing programme in suburban and central redevelopment areas, including multi-storey flats in both traditional and new-traditional construction, garages and large shopping centres:—

Assistant Architect—Grade A.P.T. VIII (£785/£860 per annum).

Assistant Architect—Grade A.P.T. VII (£735/£810 per annum).

Architectural Assistant—Grade A.P.T. IV (£580/£625 per annum).

Applicants for Grades A.P.T. VII and VIII must be Associate Members, and for Grade A.P.T. IV must have passed the Intermediate Examination, of the R.I.B.A., or hold equivalent qualifications.

The posts are permanent, superannuable, subject to a medical examination and to one month's notice on either side.

Applications, endorsed with the heading of the post, stating age, present position and salary, qualifications and experience, together with the names of two persons to whom reference can be made, should reach the undersigned not later than 21st December, 1954.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER,
City Architect.

Civic Centre, Birmingham, 1. [8616

APPOINTMENTS—contd.

WASHINGTON URBAN DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the post of Architectural Assistant at a salary within the amended A.P.T. Grade III (£625—£725) of the National Scheme of Conditions of Service. Housing accommodation will be provided if required.

Form of application may be obtained from the undersigned and should be completed and returned on or before noon on Friday, the 24th December, 1954.

ARTHUR C. JONES,
Clerk of the Council.

Council Chambers,
Washington,
Co. Durham. [8493

COUNTY OF HUNTINGDON.

COUNTY ARCHITECT'S DEPARTMENT.

APPOINTMENT OF SENIOR BUILDING INSPECTOR.

APPLICATIONS are invited for the appointment of SENIOR BUILDING INSPECTOR at a salary in accordance with the new A.P.T. Grade IV (£675 × £30 (5)—£825 per annum). There will be travelling allowance on the Council's approved scale.

Candidates should hold the Certificate of the Institute of Municipal Engineers (Building Inspectors) or equivalent qualification and will be directly responsible to the County Architect for the organization of the Section dealing with the execution of maintenance and minor alteration works associated with all buildings under the control of the County Council, including the preparation of estimates, specifications and condition reports for such works.

The appointment will be subject to the provisions of the Local Government Superannuation Acts and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, experience, present position and salary, together with the names of two referees, should be delivered to S. M. Holloway, A.R.I.B.A., County Architect, County Buildings, Huntingdon, in a sealed envelope endorsed "Senior Building Inspector," by Wednesday, December 29, 1954.

A. C. AYLWARD,
Clerk of the County Council.

County Buildings,
Huntingdon.
December 10, 1954. [8617

THE UNIVERSITY OF LIVERPOOL

APPLICATIONS are invited for the post of LECTURER and STUDIO INSTRUCTOR in the School of Architecture. The initial salary will be within the range £550-£950, according to qualifications and experience.

Candidates will be expected to have had several years of experience in practice, and preference will be given to those with special knowledge of building, science and construction, or with interest in pursuing architectural research in historical, social or structural fields.

Applications, stating age, qualifications and experience, together with the names of three referees, should be received not later than December 31, 1954, by the undersigned, from whom further particulars may be obtained.

STANLEY DUMBELL,
Registrar.
[8576

THE UNIVERSITY OF LIVERPOOL.

APPLICATIONS are invited for the post of Lecturer (Grade II) in the Department of Civic Design, at an initial salary within the range £550—£1,000 per annum, according to age, qualifications and experience.

Applications, stating age, qualifications and experience, together with the names of three referees, should be received not later than Thursday, 23rd December, 1954, by the undersigned, from whom further particulars may be obtained.

STANLEY DUMBELL,
Registrar.
[8597

APPOINTMENTS—contd.

CITY ARCHITECT'S DEPARTMENT, MANCHESTER.

APPLICATIONS are invited for the following appointments: Permanent Staff, Assistant Architect; Temporary Staff, Assistant Architect—salary APT Grade V £620 to £670 per annum, subject to review. Forms of application may be obtained from the City Architect, Box No. 488, Town Hall, Manchester 2, and should be returned to the same address by 24th December, 1954. Canvassing is prohibited. [8614

COUNTY BOROUGH OF EAST HAM.

QUANTITY SURVEYOR, GRADE IV
£580—£625.

LONDON Weighting is paid in addition. Salary in excess of the minimum may be paid according to qualifications and experience.

A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms returnable by 17th December, 1954, from the Town Clerk, Town Hall, East Ham, E.6. [8599

COUNTY BOROUGH OF EAST HAM.

JUNIOR ARCHITECTURAL ASSISTANT
GRADE I—£490-£535.

TEMPORARY ESTIMATOR GRADE V
£620-£670.

LONDON Weighting is paid in addition. Salary in excess of the minima may be paid according to qualifications and experience.

Subsistence allowances may be granted over a reasonable period to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms returnable by December 24, 1954, from the Town Clerk, Town Hall, East Ham, E.6. [8605

MINISTRY OF WORKS.

ARCHITECTURAL ASSISTANTS required for drawing office of the Ancient Monuments Branch in London.

Candidates must have had at least three years' architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. standard. They must also have experience of building and site surveying, a sound knowledge of construction and a live interest in historic architecture. Theodolite and levelling knowledge are desirable.

Salary £442 to £695 per annum. Starting pay according to age and experience. Prospects of promotion and permanency.

State age and full details of training and experience to Chief Architect, Ministry of Works, W.G.10/C.A.16(D), Abell House, John Islip St., London, S.W.1. [8609

THE Metropolitan Borough of Hampstead require Junior Architectural Assistant. Salary Higher General Division (£170-£175), plus London Weighting. Medical examination. No housing provided. Applications, stating age, details of experience, educational certificates gained, and giving three referees, to reach the Town Clerk, Town Hall, Haverstock Hill, N.W.3, by 22nd December, 1954. [8594

BRITISH ELECTRICITY AUTHORITY.

MIDLANDS DIVISION.

APPLICATIONS are invited for the following appointments in the Generation (Construction) Department. N.J.B. service conditions, superannuable appointments, salaries within Schedule "D" of the Agreement:—

(a) Senior Draughtsman (Architectural), Grade 5, at Wolverhampton (Vacancy No. 828MD).
(b) Engineering Draughtsman (Electrical), Grade 6, at Birmingham (Vacancy No. 832MD).

Applicants for these positions should have received sound technical training and practical experience, in particular for (a) in the layout and design of main and auxiliary buildings associated with power stations, and for (b) in the layout of electrical equipment for power stations, including works switchgear, and works systems.

Appropriate technical qualifications will be an advantage; opportunities for advancement and for broadening experience; good service conditions. Salary ranges, Grade 5 £640 to £740, and Grade 6, £510 to £630 per annum.

Apply, quoting the vacancy number, on form AE6, available from the Establishments Officer, 53 Wake Green Road, Moseley, Birmingham, 13, by 18th December, 1954. [8592

CONTRACTS

FAILSWORTH URBAN DISTRICT COUNCIL.

ERECTION OF 12 DWELLINGS,
WRIGLEY HEAD
AND ANCILLARY ROAD WORKS.

THE Council invite tenders for the erection of

4 Pairs of one-bedroomed Bungalows.
2 Pairs of two-bedroomed Houses.

Roadworks consisting of footway kerb. Carriageway (approx. 200 sq. yards) and drainage.

Forms of tender, Bills of Quantities and Specifications may be obtained from the Engineer and Surveyor, Town Hall, Failsworth, Manchester, upon a deposit of two guineas which will be refunded on receipt of a bona fide tender.

Drawings and Conditions of Contract may be inspected at the above office during office hours.

Tenders must be enclosed in a plain sealed envelope endorsed "12 Dwellings Wrigley Head" and delivered to the undersigned not later than Wednesday, December 22nd, 1954.

The Council does not bind itself to accept the lowest or any Tender.

JOHN WALTON,
CLERK OF THE COUNCIL.
Town Hall,
FAILSWORTH,
Manchester.
November 24th, 1954.

[8574

WEXFORD COUNTY COUNCIL. REPUBLIC OF IRELAND

CONSTRUCTION OF REINFORCED CONCRETE BRIDGE.

THE Wexford County Council invites tenders from Civil Engineering Contractors, experienced in construction of reinforced concrete bridges and in underwater works, for the building of a new reinforced concrete bridge over the River Slaney, at Wexford.

The Bridge is approximately 35ft wide and 1,883ft long divided into:—

(a) Five arch spans of 779ft 8in overall including one 150ft arch span, two 144ft arch spans and two 128ft 6in arch spans and two main abutments.

(b) Eight approach spans of articulated portal frame construction of 74ft span each.

(c) Embankments incorporating the existing old bridge approaches sheet piled and filled to appropriate levels, about 149ft long at the South-Western end and about 362ft long at the North Eastern end.

The foundations are reinforced concrete piles. The intermediate arch piers and main abutments will be constructed inside cofferdams to below river bed level which averages about 24ft below high tide.

Drawings, Specifications, Conditions of Contract and Bills of Quantities have been prepared by the Council's Consulting Engineer, Mr. W. J. L. O'Connell, M.E., F.R.I.C.S., M.Inst.C.E.I., 9, South Mall, Cork.

The Council does not bind itself to accept the lowest or any tender. The time taken for completion will be taken into account in deciding on the award of the contract. The acceptance of the tender will be subject to the approval of the Minister for Local Government.

Applications for copies of documents, Plans, Specifications, Conditions of Contract, Bills of Quantities and Drawings, should be made to the Consulting Engineer, Mr. W. J. L. O'Connell, M.E., F.R.I.C.S., M.Inst.C.E.I., 9, South Mall, Cork, accompanied by a deposit of £50 (returnable after receipt of a bona fide tender not subsequently withdrawn).

The documents may be inspected either at the County Council Offices, County Hall, Wexford, or at the offices of the Consulting Engineer.

Tenders on the prescribed form (unaltered in purport), signed and in a sealed envelope endorsed with the name of the contractor and the words: "Tender for Wexford Bridge" must be delivered to the undersigned not later than 12 o'clock noon on Monday, February 14th, 1955. Separately sealed Bills of Quantities fully priced and extended and totalled in ink and endorsed with the name of the contractor and the words: "Priced Bills of Quantities for Wexford Bridge" should be lodged at the same time. Otherwise the tender will not be considered bona fide.

The sealed packages containing the priced Bills of Quantities will be returned unopened to the unsuccessful contractors on application. The contractor whose tender is accepted will be required to enter into a formal contract with the Wexford County Council and to give a satisfactory Bond for the performance of the Contract as provided for in the Conditions of Contract.

Prospective Contractors are to furnish evidence of their experience and competence in this class of work.

THOMAS F. McDERMOTT,
Secretary,
Wexford County Council.
County Hall,
Wexford,
Republic of Ireland.
October 20th, 1954.

[8620

CONTRACTS—contd.

BRITISH ELECTRICITY AUTHORITY.

LONDON DIVISION.

OFFERS are invited for the purchase and removal of the following from Barking Generating Station:—

1—Mather and Platt electrically operated interlocking steel slat rolling shutter complete.

Driving Motor: 3-4 h.p. 415v 50 cycle, 3-phase with limit switches and isolator.

Condition: Unused.

For permission to view and conditions of tender, application should be made to the Divisional Purchasing Officer, British Electricity Authority, London Division, Generation House, Great Portland Street, London, W.1, not later than December 16th, 1954. [8591

FAILSWORTH URBAN DISTRICT COUNCIL.

ERECTION OF 12 DWELLINGS,
BARDSLEY FOLD, FAILSWORTH.

THE Council invite tenders for the erection of 12 dwellings on the above estate, comprising of:—

Two pairs of two-bedroomed houses.
Two four-blocks each having two two-bedroomed houses and two three bedroomed houses.

Forms of tender, Bills of Quantities and Specifications may be obtained from the Engineer and Surveyor, Town Hall, Failsworth, Manchester, upon a deposit of two guineas which will be refunded on receipt of a bona fide tender.

Drawings and Conditions of Contract may be inspected at the above office during office hours.

Tenders must be enclosed in a plain sealed envelope endorsed "12 Dwellings Bardsley Fold" and delivered to the undersigned not later than Wednesday, December 22nd, 1954.

The Council does not bind itself to accept the lowest or any tender.

JOHN WALTON,
CLERK OF THE COUNCIL.
Town Hall,
FAILSWORTH,
Nr. Manchester.
November 24th, 1954.

[8573

EDUCATIONAL

I.A.A.S.

FORTHCOMING EXAMINATIONS.

THE Incorporated Association of Architects and Surveyors will hold the following examinations during the week beginning May 23rd, 1955.

Architects' Section: Intermediate grade. Final grade (Parts I and II).

Quantity Surveyors' Section: Intermediate grade. Final grade (Parts I and II). Direct Final grade.

Building Surveyors' Section (Including Municipal: Intermediate grade. Final grade (Parts I and II). Direct Final grade.

Land Surveyors' Section: Intermediate grade. Final grade. Direct Final grade.

Fire Surveyors' Section: Direct Associate grade (Parts I and II).

The examinations will be held in London, and at selected provincial centres. Applications from candidates for permission to sit, made on the prescribed form, must be received not later than Monday, February 28th, 1954.

Full information on application to the General Secretary, I.A.A.S., 75, Eaton Place, London, S.W.1. [8598

ARCHITECTURAL APPOINTMENTS VACANT

SLATER, Uren & Pike require experienced assistants.—Write stating experience, etc., to 29, Gower St., W.C.1. [8595

EXPERIENCED Assistant required by Architects in Gray's Inn. Work includes flats, hospitals, factories, etc.—Reply, with full details and salary required, to Box 0346. [8564

ASSISTANT (Inter. Standard) required for varied practice in Midland County Town, excellent opportunity for experience and responsibility; bonus scheme.—Box 0382. [8570

ARCHITECTURAL Assistant, aged 25 to 40 years, required. Salary according to experience and qualifications.—Apply to W. Curtis Green, R.A., Son & Lloyd, 5, Pickering Place, St. James's Street, S.W.1. [8611

JOHN WRIGHT requires an assistant, an architect, with knowledge of luxury interior work, and with enough experience to carry a contract right through.—Please reply to Box 0528, c/o A. & B.N. [8601

ARCHITECTURAL APPOINTMENTS VACANT—contd.

THE TIMBER DEVELOPMENT ASSOCIATION, Ltd., requires an Assistant in its Architectural Section to undertake prototype designs of contemporary timber structures.
Salary £700-£800 per annum.

THE post carries considerable responsibility and requires imaginative and creative ability. The applicant must also be able to translate his ideas into live designs.

APPLICATIONS to be addressed to the Director, Timber Development Association, Ltd., 21, College Hill, London, E.C.4, giving details of age, education and qualifications and experience. [8606

ASSISTANT (male) required for London architect. Inter. R.I.B.A. standard with at least three years' office experience. Able to prepare working drawings.—Write or telephone for appointment to Walters & Kerr Bate, 14, Gray's Inn Square, London, W.C.1. Holborn 9850. [8612

ARCHITECTURAL Assistant required for small general office at Potters Bar, Middlesex, for estate development, private housing and industrial work; salary offered about £500 p.a.—Details of age and experience to Booth & Booth, Leighton House, Potters Bar, Middlesex. [8569

ARCHITECTURAL Assistants required to work on new industrial projects, applicants must be prepared to accept full responsibility for the presentation, detailing and completion of scheme.—Apply to Box 0525, c/o A. & B.N., stating experience and salary required. [8590

REQUIRED for London and the Home Counties —Representative having first-class connection with architects and contractors.—Apply by writing in the first instance stating experience, salary, age, etc., to Messrs. Smith's Fireproof Floors, Ltd., Imber Court, East Molesey, Surrey. [8572

REQUIRED at once, Architectural Assistant, R.I.B.A. Intermediate standard or above. Office experience essential. Good draughtsman working drawings and details. Private practice. West Lancashire area. Salary according to age and experience.—Write, with details, Box 0347. [8565

A VACANCY now occurs for an Assistant Surveyor with a well-known East Anglian brewery. This is a post with good prospects for an experienced man qualified in building, drawing and maintenance.—Apply, stating experience, qualifications, salary required, etc., to Box 0560, c/o A. & B.N. [8610

MISCELLANEOUS SECTION

RATE : 1/6d. per line, minimum 3/-, average line 6 words. Each paragraph charged separately.

BOX NOS. add 2 words plus 1/- for registration and forwarding replies which should be addressed c/o, "The Architect & Building News," Dorset House, Stamford Street, London, S.E.1.

PRESS DAY Monday. Remittances payable to Iliffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.

No responsibility accepted for errors.

SITUATIONS VACANT

TECHNICAL Assistants required for Purchase Division with knowledge of building, general contracting, installation and equipment of engineering works.
THE vacancies to be filled offer outstanding opportunities to men with the necessary qualifications.

PLEASE write giving full details of age, experience and salary required to Staff Office, Briggs Motor Bodies, Ltd., Dagenham, Essex. [8600

FIREPLACE manufacturers require fully experienced salesman for their West End showroom; state age, experience and salary required; present staff advised.—Box 0555, c/o A. & B.N. [8604

BROWN, MOULIN & ANTRUM, 14, Queen Anne's Gate, S.W.1, invite applications from experienced assistants interested in working on large hospital project and able to take charge; salary by arrangement. [8603

DRAUGHTSMAN required in drawing office of a company engaged in the design and manufacture of timber prefabricated houses; pension scheme available.—Apply in writing, giving full details of experience, qualification, etc., to The Housing Director, H. Newsum, Sons & Co., Ltd., Lincoln. [8602

FAIENCE and wall tiling.—A progressive company has a berth available for a first-class man with commercial ability plus a flair for design and layout, preferably coupled with architectural training and a knowledge of the application of faience and wall tiling.—Write full details of experience to Box ZN.99, Deacon's Advertising, 36, Leadenhall St., London, E.C.3. [8607

FOR SALE

WE specialise in white and coloured urinal sets. Let us quote you.—Thos. Lord, Ltd., Mitella Street, Burnley. [0149

FOR sale. Various paint-spraying equipment.—B.G. Plant (Sales Agency), Ltd., Watlington, Oxfordshire. Tel. Watlington 44. [8613

430FT sup. solid, beautiful, pre-war, light oak panelling, at 5s per ft super; handsome 4ft wide solid oak staircase, £25.—Richards, 94, Station Rd., E.4. Silverthorn 3681. [8619

BLOCK-MAKING machine, new British-made mobile "Multibloc," produces 960 3in B.S.S. blocks per hour, other sizes proportionately, solid or cavity.—Alan R. Davies, 47a, Zetland Rd., Bristol, 6. [8583

ALL hardwood mouldings, plain and embossed, embossed ornaments and dowels; send for catalogue and to-day's lowest trade prices.—Dareve's Moulding Mills, Ltd., 60, Pownall Road, Dalston, E.8. Clissold 1543/4. [0142

CONTRACTS WANTED

SUB-CONTRACTS wanted, all ground work, including footings, drains, gas, water, electricity, etc.—M. J. Keaveny, 45, Lodge Rd., West Croydon, Surrey. [8618

PLANT FOR HIRE

CHASESIDE mechanical shovels, Major type, by day, week or contract, with drivers; tipping lorries supplied if required with shovels.—Henry Froud, Ltd., Primrose Wharf, Tunnel Ave., Greenwich, S.E.10. Tel. Greenwich 0072-3. [0138

NISSEN HUTS, ETC.

EX-Army Nissen and other buildings available; also, manufactured buildings.—Universal Supplies (Belvedere), Ltd., Crabtree Manorway, Belvedere, Kent. Erith 2948. [0145

INSURANCE

ARCHITECTS' Indemnity Insurance effected. Please write for Proposal Form to E. J. SAXBY, Incorporated Insurance Broker, 37a, Carfax, Horsham, Sussex. Tel. 990. [8549

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INDEX TO ADVERTISERS

Official Notices, Tenders, Auction, Legal and Miscellaneous Appointments on pages 44, 45 and 46

Adamite Co., Ltd., The 31
Adams, Robert (Victor), Ltd. ... 34
Ascot Gas Water Heaters, Ltd. 20
Atlas Stone Co., Ltd. 11

Bath & Portland Stone Firms, Ltd. 13
Baume & Co., Ltd. 28
Blackwells & National Roofings, Ltd. 37
British Aluminium Co., Ltd., The 5
British Electricity 40
British Metal Windows Man. Assoc. 26
British Paints, Ltd. 39
Buckwyn Constructions, Ltd. .. 38

Cellon, Ltd. 46
Cement Marketing Co., Ltd. .. 27
Churchouse, C. M., Ltd. 34
Concrete, Ltd. 17
Conex-Terna, Ltd. 14
Coverite (Asphalters), Ltd. .. 34
Curfew Doors & Shutters, Ltd. 40

Docker Bros. 9
Dohm, Ltd. 31

Edison Swan Electric Co., Ltd., The 24
Ellis School of Architecture .. 46
Engert & Rolfe, Ltd. 33
Essvian, Ltd. 36

Ferranti, Ltd. 41
Fibreglass, Ltd. 30
Finnish Lion Board 33

General Electric Co., Ltd., The 18
Gerrard, J., & Sons, Ltd. 15
Gibson, Arthur L., & Co., Ltd. 32
Gimson & Co. (Leics.), Ltd. .. 33
Gliksten, J., & Co., Ltd. 6
Gray, J. W., & Sons, Ltd. 32
Gulf Radiators, Ltd. 2
Gummers, Ltd. 37

Hall, J. & E., Ltd. *Inside Front Cover*
Henley's W. T., Telegraph Works Co., Ltd. *Outside Back Cover*
Hill, H. C., Ltd. *Inside Back Cover*

Holoplast, Ltd. 19

Kay & Co. (Engineers), Ltd. .. 43
King, J. A., & Co., Ltd. 16
Kinnear Shutters 32

Lead Sheet & Pipe Council .. 12

Macandrews & Forbes, Ltd. .. 41
Margolis, M., Ltd. 46
McCarthy, M., & Sons, Ltd. .. 31
Mealing Bros., Ltd. 31
Morris, Herbert, Ltd. 31

Norris, C. W., Ltd. 35

Parsons, Thos., & Sons, Ltd. ... 40
Permanite, Ltd. 7
Photograms of the Year (Iliffe) 42
Pilkingtons Bros., Ltd. 23
Plannair, Ltd. 43

Radiation Group Sales, Ltd. .. 22
Reliable Plywood Co., Ltd. .. 42
Ringmer Building Works, Ltd. 33
Ronuk, Ltd. 35
Rudkin, S. O., & Co., Ltd. .. 33

Semtex, Ltd. 29
Shutter Contractors, Ltd. 38
Siemens Supplies, Ltd. 21
Smith, Samuel, & Sons, Ltd. .. 42
Soundproof Construction 33
Spencer, Lock & Co., Ltd. .. 33
Stillite Products, Ltd. 39
Sugg, Wm., & Co., Ltd. 8
Sundeala Board Co., Ltd. 4
Surfex Flooring Co. 33

Tangyes, Ltd. 16
Terradura Flooring Co., Ltd. 32
Thom, J., Ltd. 32
Thorn, J., & Sons, Ltd. 28
Timber Development Assoc. .. 25

Unique Balance Co. 36

Vardale Fencing Co., Ltd. 33

Ward, Thos. W., Ltd. 3
Williams & Williams, Ltd. 1
Wood, Edward, & Co., Ltd. .. 10
Youngman, W. C., Ltd. 38

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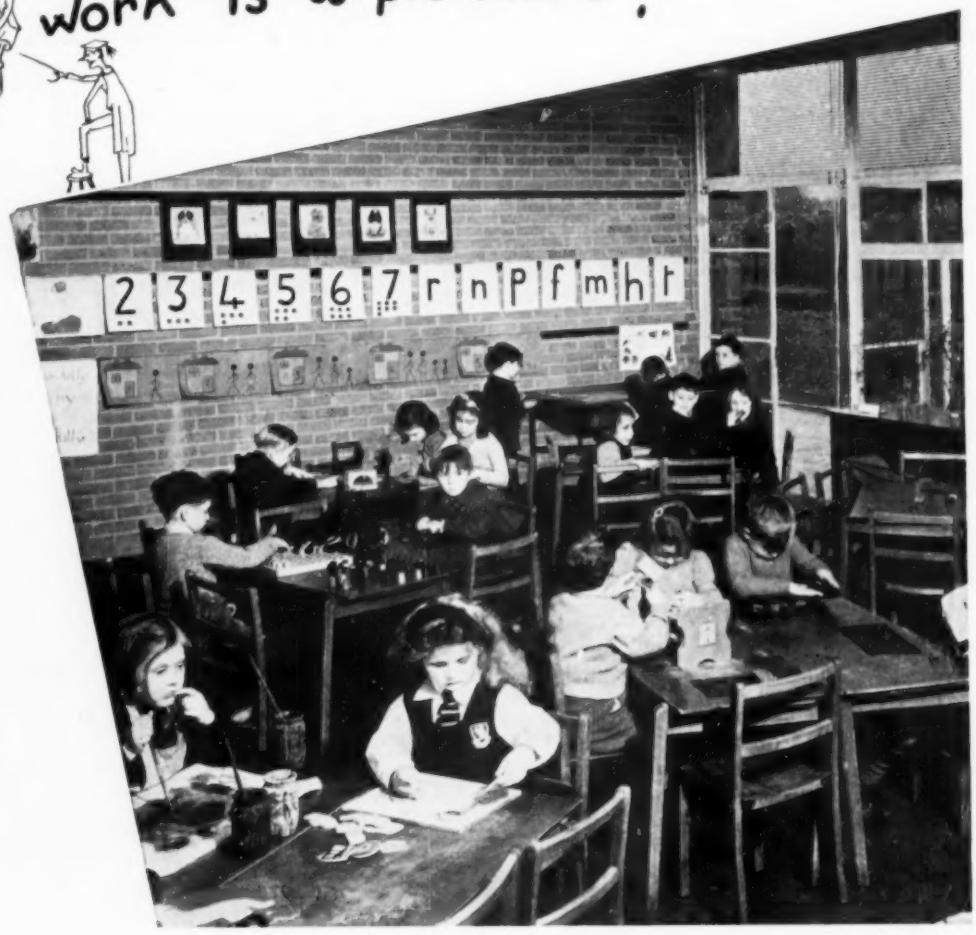
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